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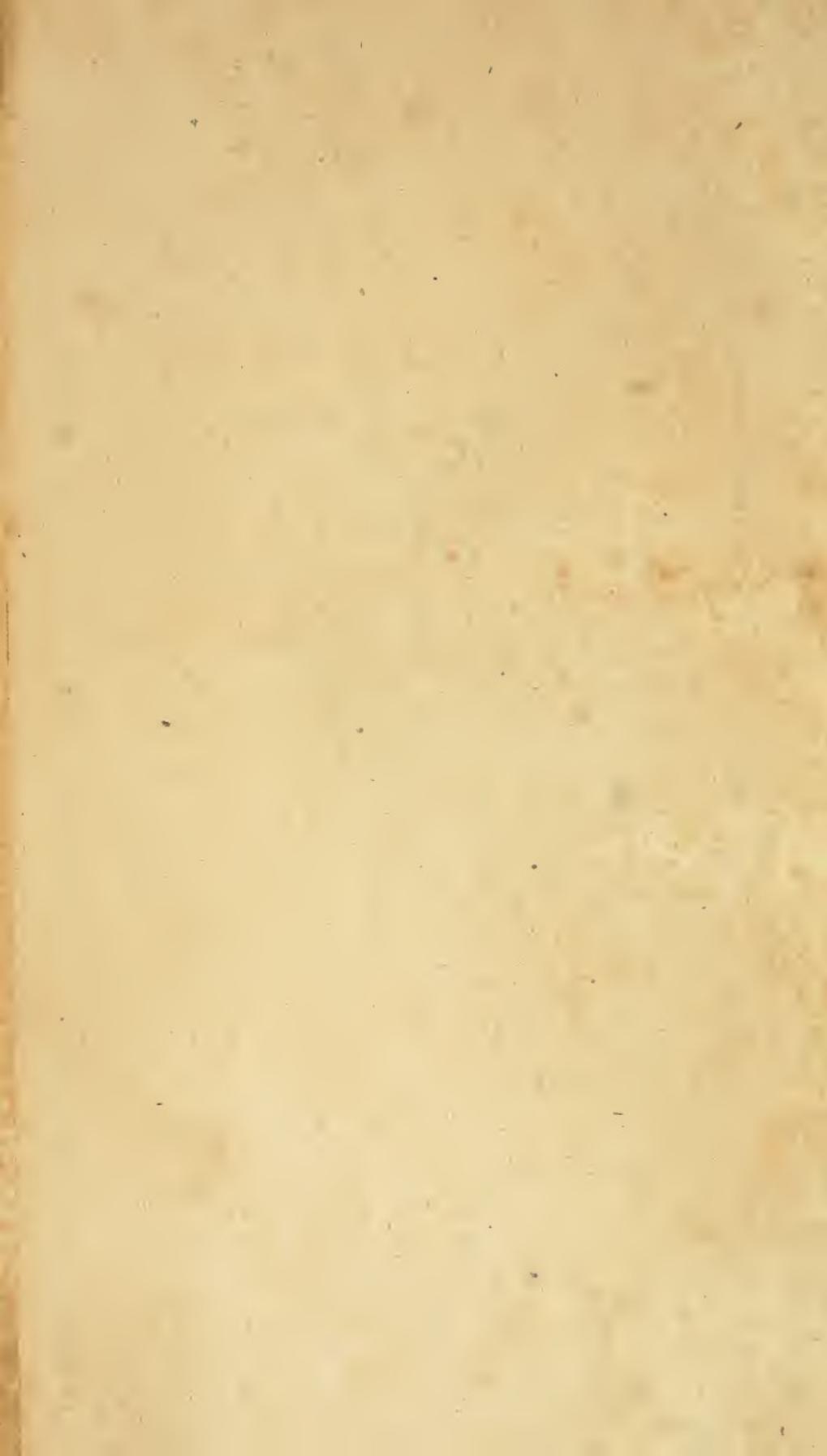
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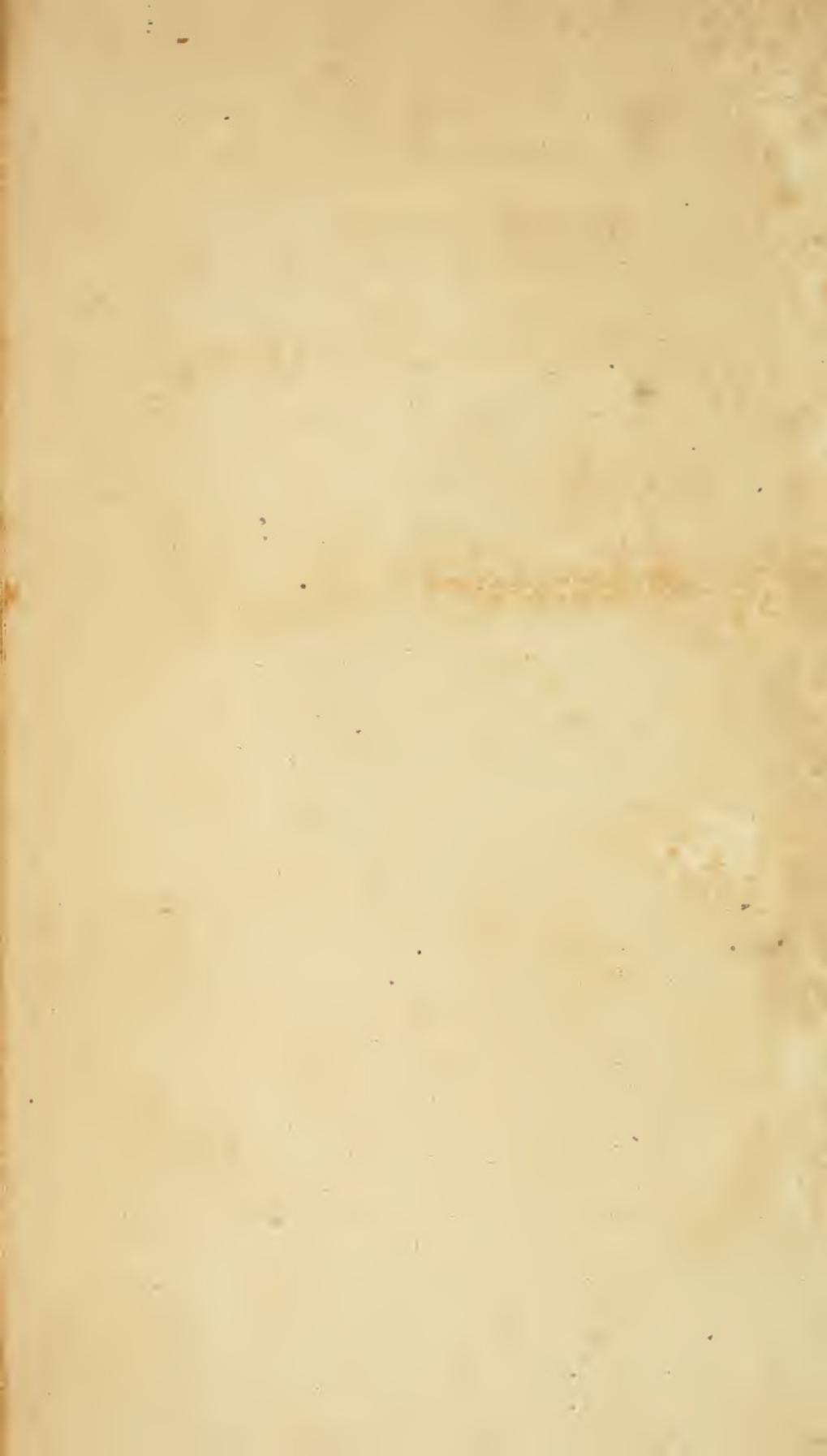
*F. W. C. Shattuck*

*W. R.*









GEO. C. SLATTUCK.

PRACTICAL  
OBSERVATIONS  
ON  
DISORDERS OF THE STOMACH,  
WITH  
REMARKS  
ON  
THE USE OF THE BILE  
IN PROMOTING  
DIGESTION.

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THE THIRD EDITION, WITH ADDITIONS.

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BY  
GEORGE REES, M. D.

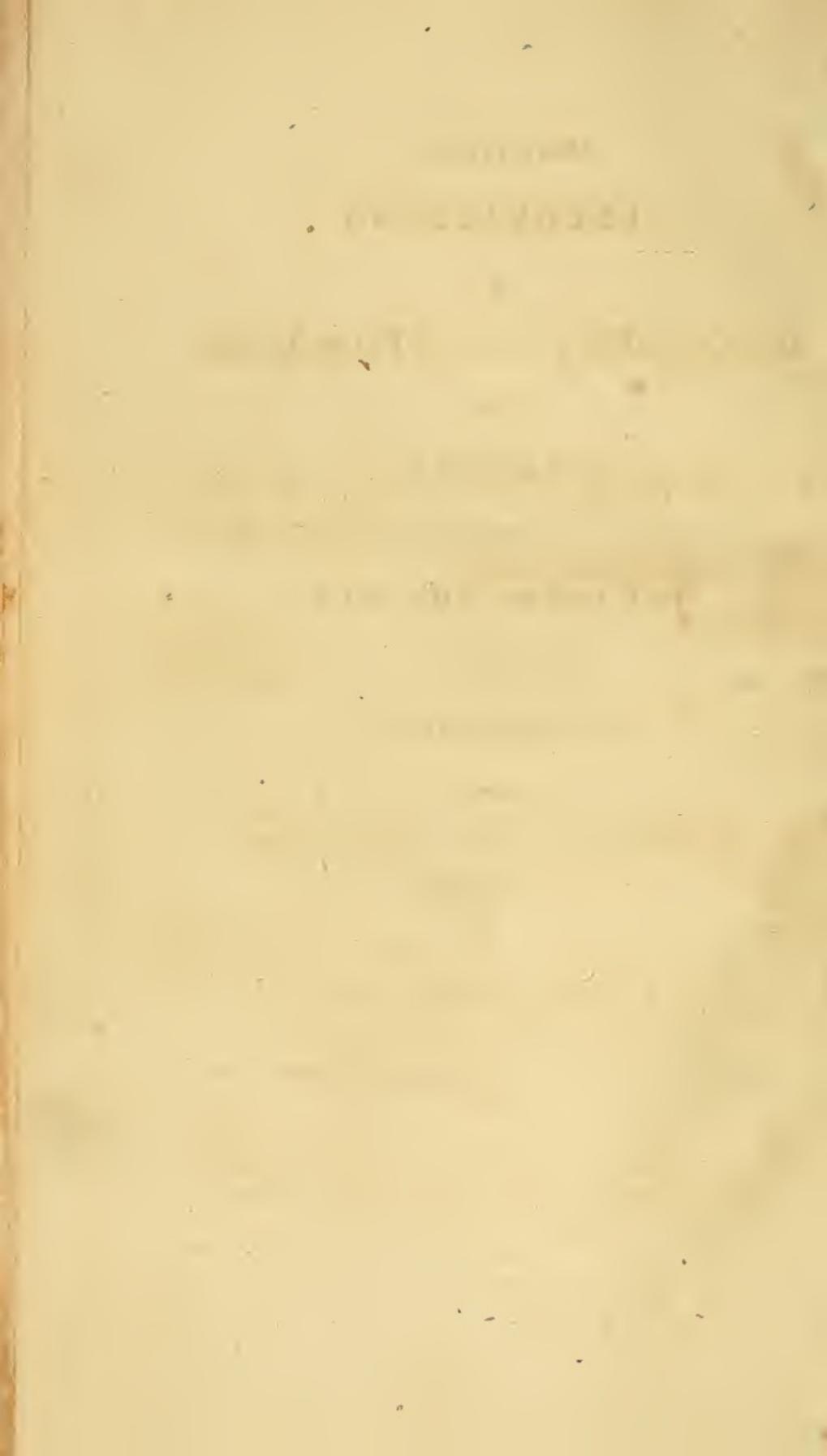
MEMBER OF THE ROYAL COLLEGE OF PHYSICIANS,  
LATE SENIOR PHYSICIAN TO THE LONDON DISPENSARY, &c. &c.

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LONDON:  
PRINTED AND PUBLISHED BY M. ALLEN,  
No. 15, Paternoster-Row.

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1814.



## DEDICATION.

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TO

JAMES SIMS, M. et L. L. D.

UPWARDS OF TWENTY YEARS PRESIDENT OF THE  
LONDON MEDICAL SOCIETY.

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This Work is dedicated as a Mark of  
Respect and Gratitude:

*Respect*—for his great Talents and pro-  
found Learning:

*Gratitude*—for the disinterested Favors  
conferred on his obliged Friend, and

Humble Servant,

Finsbury-Square,  
April 30, 1814.

GEO. REES.

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## P R E F A C E.

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IN submitting a third edition of this work on Disorders of the Stomach to the examination of the Public, it was my intention to have made very considerable additions; but the unavoidable interruptions of a professional life have, in a great measure, prevented the execution of my design.

In a work of this description, the utility of the publication should be the criterion of its merit; hence I have been more particular in acquiring facts than embellishing them, and have paid less attention to ornament than accuracy.

In every disease which falls under my consideration, I feel disposed to ask, what influence has the Stomach in producing it?

A consideration that naturally arises from making one organ the subject of peculiar attention; by having it always brought before the mind, its functions are more thoroughly understood, and its derangement more speedily detected.

Finding very little information to be obtained from authors (which on a subject of such importance is almost incredible) I have studied chiefly from the Book of Nature; and the plan I have adopted, I shall take the liberty of recommending to the junior practitioner from my experience of its advantages.

At the public institution in which I acted as physician, I had generally about a hundred patients under cure; from these I daily selected one or two, whose cases were the most interesting, and these I made the subject of close investigation, being particularly careful to obtain a complete history of the symptoms from the first period at which it is possible to conceive the disease could originate. By this plan I have formed a valuable collection

collection of interesting cases, on which I have bestowed a considerable expenditure both of time and thought.

It is curious to observe how difficult it is sometimes (without any intention on the part of the patient to mislead or deceive) to get hold of such facts as most materially tend to elucidate the nature of the disorder; I shall mention one as an example.

A gentleman about forty years of age consulted me for the following symptoms: frequently as he walked through the streets, he was seized with sickness at Stomach, and immediately fell down in a fainting fit, without any convulsion, or any symptom that bore the slightest resemblance to epilepsy: he generally recovered in five or ten minutes, and excepting this, was not conscious of any thing like disease affecting his constitution. Now here I should like the professional reader to put his hand upon the page, and try if his own ingenuity will enable him to discover

discover the cause of the complaint. I at first suspected Gall Stones, but after asking every question that I thought could lead to detection, candidly confessed I could give no opinion as to the nature of the disease : he then informed me, that five years previous to this he had fought a duel at the Cape of Good Hope, that the bullet was lodged in his side, and had never been extracted ; could this, he said, have any thing to do with it ?

Now the case was immediately explained ; the motion of the body in walking, probably occasioning the bullet by its pressure on some particular part to bring on sickness, and the fainting which followed. With what satisfaction, let me ask, could any one have treated the case without being apprized of this fact ? or rather, what success could be expected to attend, where the cause was so much beyond the reach of medical assistance ?

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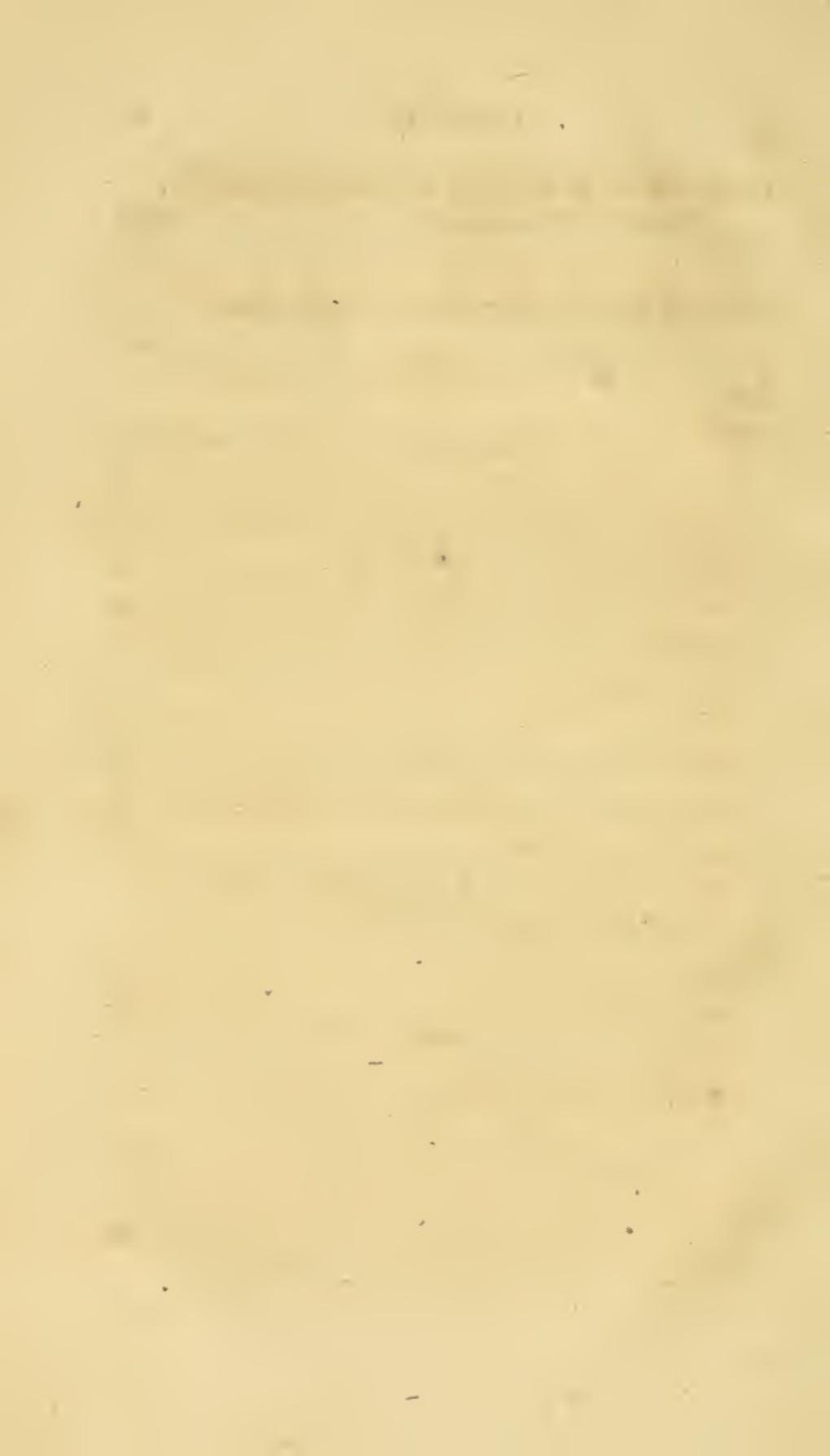
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PRACTICAL



PRACTICAL  
OBSERVATIONS, &c.

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WHOMEVER deliberately investigates the functions of the animal œconomy, will readily acknowledge, there is no organ in the body more worthy the attention of the practitioner than the Stomach; and considering the importance of its operations, no one which has been less the subject of examination.

It is not only the receptacle of our food, but it contributes in an essential degree to that alteration, by which the food is assimilated to the constitution; this is its most obvious operation.

It has besides a great influence over the actions of the system, and many phænomena in disease can only be explained by referring to this organ, as the source from which they originate.

These considerations have induced me to attend very carefully on all occasions to its actions, and have afforded me an opportunity of observing certain peculiarities, which it will be the object of this publication to describe.

## STRUCTURE OF THE STOMACH.

THE Stomach is a large membranous bag situated in the cavity of the abdomen, and placed in a transverse direction to the spine.

It is attached to the omentum and pancreas, which are in its vicinity, and therefore participates in any material alteration which these parts undergo from mechanical irritation, as well as from that sympathy with which, in consequence of its nervous structure, it is endowed.

The canal through which the food is conveyed from the mouth is called the œsophagus, and that opening in which the œsophagus terminates the cardiac orifice of the Stomach, the inferior opening leading to the intestines is called the pyloric orifice.

The upper orifice of the Stomach is liberally supplied with branches of nerves, particularly from the eighth pair; from this cause, and perhaps likewise from not being so well supplied with mucus as the general surface of the Stomach, it possesses an extraordinary degree of sensibility.

The disease to which we affix the term cardialgia, or heart-burn, is owing to an acid or acrid matter, which produces no painful impression on

on any other part of the Stomach, but seems quite corrosive when brought into contact with this.

The lower orifice of the Stomach likewise possesses certain peculiarities.

From the approximation of the fibres of the Stomach at that part, a kind of circular band is formed, which has been called the valve of the pylorus: it forms some resistance to the passage of food from the Stomach, but as it does not completely obliterate the opening, bile is occasionally regurgitated from the duodenum, and the contents of the Stomach, after being detained a sufficient length of time, are permitted to move onwards.

How this important valve should have the power of retaining the contents of the Stomach for a limited period, and then suffering them to pass, has never yet been satisfactorily explained, and appears the more extraordinary from its capability of retaining liquid as well as solid matter.

This action of the valve of the pylorus is of considerable importance to the system; for if the food did not remain a sufficient length of time to undergo the preliminary part of the process of digestion, it would of course pass off without imparting nourishment, or at least very little nourishment to the constitution. This frequently

happens, producing the disease termed *Lientery*, which proceeds sometimes from worms, from a schirrus of the pylorus, from an acidity of the stomach, from extreme debility as in the last stage of a consumption, from a paralysis of the part brought on by hard drinking, &c.

In extreme old age, when the powers of life are completely expended, this part loses its power of acting altogether, and a diarrhœa proceeding from this cause, very frequently puts a period to existence, without any other disease being present.

It is to this circumstance likewise we must refer in explaining the operation of opiates, which vary very much in their effect. Though their general tendency is to produce costiveness, every practitioner must have observed that on some occasions the bowels are relaxed in consequence of their use, which is owing to their taking off a degree of stricture on the pylorus, and thus favouring the passage of bile into the duodenum.

For the same reason, it is found serviceable now and then to combine opium with purgatives, or the tincture of opium with rhubarb at night, a combination that occasionally renders each medicine more salutary in its effect.

With respect to the dimensions of the Stomach, it is impossible to offer any thing that can approach

approach to accuracy, for it must bear some relation to the general bulk of the individual, and the Stomach of the same person is rendered small or capacious according to his habits of temperance or repletion.

Dionis mentions his having examined a subject, in whose Stomach was contained three pints of fluid, and seven pounds of meat.

Spigelius met with an instance in which the Stomach was so capacious as to contain fourteen pounds, and cases are upon record that far exceed either of these.

It is a curious fact, ascertained by De Haen and others, that the Stomach does not, like the gravid uterus, increase in thickness as it expands. He mentions the case of a celebrated character, Dr. Erndle; whose Stomach was prodigiously enlarged, and though its augmentation of bulk was the effect of progressive and gradual extension, yet its coats were not thickened. On attempting to measure the capacity of another Stomach of similar dimensions, he found that it burst from its tenuity of texture, when about twenty pints of fluid were thrown into it.\*

On the other hand, the Stomach has been found so much diminished in bulk as not to be

\* Vid, De Haen's Ratio Medendi, vol. 2. p. 100.

capable of containing more than three or four ounces: this has arisen from great abstinence, from a contraction at the cardiac orifice, and especially from that distressing and unmanageable complaint, a stricture of the œsophagus.

Ræderer, in a letter to Sir John Pringle, quotes an instance in which the Stomach was not larger than the small intestines.

Bartholin says, he met with a subject in which it did not exceed the size of a goose's egg; and Boerhaave informs us, that in the celebrated Pecquet the anatomist, it was not bigger than a walnut; there is, therefore, every possible variety.

A Stomach which I lately had occasion to examine in a child two years of age, contained something less than a quart, and the adult subject, when not vitiated by intemperance or disease, may generally be distended to three times that bulk.

But the facts which have been now stated, relative to the mechanical distension of the Stomach, will not admit of an application to the phænomena of the living body.

When a person complains of fulness at the Stomach, it does not follow as a matter of course that he has eaten as much as his Stomach is able to contain; for he may eat four times the quantity

tity of that which produces a sense of fulness and oppression, provided it is more congenial to his nature and appetite.

The fulness in the former instance, then, proceeds from the influence which that substance has over the nervous energy of the Stomach, and this is so far unconnected with the magnitude of the substance taken in, that five drops of tincture of digitalis, or a few drops of infusion of tobacco, will produce it more effectually, than matter of much greater substance and solidity.

A gentleman whom I lately attended, complained of pain at the pit of his Stomach for two years; on investigation, this appeared to arise from a blow he had received about that time that seemed to have produced inflammation on the liver. Among other symptoms he mentioned this as one: a table spoonful of any spirituous liquor, which he formerly could drink with freedom, lay like a heavy weight at the Stomach for a considerable time after it was swallowed.

A person who uses very little exercise will feel as if his Stomach were full, when he has not taken half as much as he would be capable of doing when in the habit of taking strong exercise, without any sense of fulness whatever; and though this is a fact that every one must

have had an opportunity of experiencing, it does not appear to have obtained so much attention as it deserves.

Hence the propriety of the advice long ago recommended by Hippocrates, that diet should be proportioned to labour; it being necessary that a certain quantity of matter should be thrown off from the system, either by the bowels, by the skin, or some other excretion, previous to the introduction of new. The proportion in which this matter is thrown off depends upon two circumstances:

1st. The natural vigor of the constitution.

2dly. The mode of life.

Those who are of a delicate habit, whose Stomach and bowels generate flatulence when they fast a little beyond their usual hour of refreshment, who, in short, exhibit an appearance of being of a scrofulous habit, require constant exercise; such persons are disqualified for leading a sedentary life, and are much better adapted for the plough than the counting-house. On this point parents are very liable to err in the disposal of their children, bringing them up to an inactive life, because they are delicate; the very circumstance which should determine them to make choice of a business in which confinement was not necessary, and where the exercise that attends

attends it might supply the want of vigor in the constitution.

The Stomach has hitherto been generally regarded as a receptacle for food, and an organ secreting a certain fluid which promotes digestion; but, besides this, it performs another very important function, somewhat analogous to the heart; for as the heart transmits blood, and throws it forward through the arteries to every part of the system, so there is great reason to believe the Stomach diffuses in like manner a degree of nervous energy to every part of the body, particularly to the muscles and surface of the skin.

If the reader will be prevailed upon to examine this assertion, he will find it admirably adapted to explain many phænomena that daily present themselves in disease, though it may not carry conviction to his mind when viewed as an abstract proposition. A few facts therefore may be briefly stated here, for the sake of illustration.

A person caught cold, which brought on shivering, chilliness, sickness and vomiting; he went to bed, drank some warm whey, and began to perspire. As soon as the perspiration was established, his sickness subsided, and his appetite returned; but getting out of bed in the absence

señce of the attendant on some necessary occasion; the perspiration was checked, and the sickness immediately returned.

This occurrence, so often met with, it is the fashion to explain by saying that it proceeds from the sympathy which is known to subsist between the Stomach and the skin; but this conveys no intelligible idea, at least my mind is not capable of comprehending it: to me it seems no more than saying it subsists because it does subsist.

When the small-pox affects the constitution, the Stomach is the organ on which it makes the most sensible impression, there being nothing in that disease, when not communicated by inoculation, by which we can distinguish it from other fevers previous to the appearance of the eruption, except *pain in the region of the Stomach*; but as the eruption comes out, this pain begins to diminish: the Stomach, in this instance, has thrown out that which oppressed it, or, to use the language generally employed, there is in this case *a great determination to the surface of the skin*—an expression, by the way, perfectly compatible with the opinion I entertain; and that there is a great determination to the skin under such circumstances, the following fact, which I witnessed many years ago, will evince.

A young man from the country complained of sickness at the stomach, with considerable headache, thirst, and the usual concomitants of fever; he was flushed in the face, and has been costive for several days, which induced me to recommend him half a drachm of *powdered jalap*: this, however, instead of operating on the bowels, produced a very copious perspiration, and was soon followed by the eruption of the small-pox.

Many other facts, which the reader's recollection may possibly supply, might be brought forward in support of the same opinion, that there is a constant distribution of nervous energy from the Stomach to the different parts of the body. In attempting to establish an analogy, however, between this organ and the heart, it is necessary to point out one material distinction.

The blood which is driven forward by the heart through the arteries, is returned to it by the veins; but in the action which I have supposed to exist between the Stomach and the skin, it is different, there being necessarily no return of what is thrown off; and as the matter which is thus thrown out of the system would be pernicious if retained, we see why people are liable to be affected by leaving off habitual cloathing, or being long exposed to damp and cold air without exercise; in which case they are said

*to take cold*—a term which is very objectionable, as it tends to mislead the understanding: to take cold is, in fact, taking nothing at all; it is the suppression of that excrementitious matter which cannot be retained without injuring the health;\* and therefore if a person is exposed to cold damp air when in a profuse perspiration, his risque is proportionably greater.

If the Stomach be in full vigor, a person may be exposed with impunity to such a degree of cold as would produce disease under a weaker state of that organ; and it will be almost universally observed, when a person is so affected as to take cold, that he feels not only a shivering, but a sickness, or sinking at the Stomach at the same time. It is likewise certain, that if under such circumstances, he take a glass of some cordial, a generous warmth is diffused over the body, and it is not uncommon to hear such persons say they have felt it go to the end of their fingers.

A question which very naturally suggests itself, is, How is the Stomach possessed of the power which is here attributed to it?

\* It is probable, likewise, that the living principle is drawn off by the greater affinity of surrounding agents; but this I shall endeavour to explain on another occasion.

In replying to this important question, it will be necessary to direct our attention to the brain, from which all nervous energy is primarily derived; and here I shall take the liberty of introducing an opinion more remarkable for truth than novelty, that the brain secretes a certain fluid, which passes along the nerves to different parts of the body, enabling them to perform the various actions and functions to which they are appropriated.

This opinion I adopt as an incontrovertible truth, and will further add the two following assertions, to which I may hereafter have occasion to allude.

1st. That the quantity thus supplied is proportionate to the natural vigour of the individual, and is not acquirable by habit.

2dly. That the quantity supplied by the brain instead of being equally diffused throughout the system, may be directed to particular parts in an undue proportion.

Many facts could be adduced in proof of each of these propositions. The first, which would seem to carry conviction with it, is very much overlooked; thus, for instance, it is not at all uncommon to hear the industry of certain individuals recommended as a pattern of imitation for others; not considering that the capability of such

such exertion depends upon original formation, and is not imitable by another without detriment to his constitution.

To render this remark more familiar and intelligible, I would quote for example the circumstance of two persons, one of whom is capable of great exertions throughout the day, and after five or six hours uninterrupted sleep, rises completely renovated and restored, and capable of the same exertion the day following. The other, however, whose exertions have scarcely been equal to his own, instead of six hours sleep, requires eight; and if he sleep only as long as his more powerful competitor, he will infallibly find his strength gradually impaired, a fact that I have repeatedly taken notice of.

This reasoning may be advantageously applied to the Stomach, there being, with respect to that organ in different individuals, great original peculiarities: those who are vigorous and robust, can eat and digest substances of almost any kind of texture and solidity, whilst those of delicate structure are obliged, even in their best health, to make some sort of selection.

In the treatment of such patients, this point ought to be attended to; for it is only in the power of medicine to remove accidental infirmities, so as to bring the Stomach to the standard of

of health. It cannot make a very weak Stomach as vigorous as another, though by temperance, regimen, exercise, &c. it may be enabled to perform its functions with tolerable regularity.

It will be superfluous to multiply examples in proof of the assertion just now mentioned, since it is known to every body, that some persons can drink a bottle of wine every day without apparent inconvenience, whilst others are disordered by the habitual use of a few glasses. The difference that is discernible with respect to liquids, is equally demonstrable with regard to solids: hence it is that young persons when in health can eat almost any kind of food, without feeling a sense of oppression after it; but elderly people are obliged to be more circumspect, and are incapable of bearing any considerable errors in diet.

The second proposition, on which I shall omit for the present to expatiate, is alike admissible of proof. If the mind be very much exercised, the appetite is impaired: hence literary persons are subject to dyspeptic complaints. Diseases of the Stomach, says Tissot, in his "Advice to the People," follow literary men as the shadow does the substance.

If the reasoning which I have now ventured to employ shall appear to be correct, we shall be obliged

obliged to view those two important organs in their connection with each other, if we wish to obtain a clear conception of disease.

An irritation on the brain, such as is found to take place, for instance, in the first tendency to water in the head, is often accompanied with a remarkable increase of appetite. A child in this situation frequently takes its food with great avidity, but when the first stage is passed, and water is effused, so as to make pressure in the head, the appetite is greatly impaired.

A gentleman whom I attended some time ago with Mr. Morris of Chandos-Street, exhibited symptoms of mental derangement; he talked rapidly, slept little, had a great propensity to exercise, and had besides a wonderful increase of appetite; he ate three or four pounds of beef-steaks at a meal, and drank very freely of wine after it. The irritation on the brain in this case, occasioned it to secrete a much larger quantity of nervous fluid than usual, which being determined to the Stomach, produced these effects. If this state continue a sufficient length of time, the power of the sensorium becomes exhausted, and the appetite subsides. It is not uncommon for patients, who are attacked with symptoms of high excitement and delirium, to sink in the course of a few days into a state of great debility, having

having a dry black tongue, and every symptom of typhus fever.

The state of the Stomach under fevers in general, admits of an explanation, by a reference to the same principle. *In all fevers, the substance of the brain itself is the seat of the disease:* to this remark, which is the result of considerable reflection, I think I can challenge contradiction: \* waving, however, the consideration of

the

\* Dr. Clutterbuck, in his excellent work, entitled, "An Inquiry into the Seat and Nature of Fever," has given the most satisfactory evidence in proof of this assertion; I hope I may be permitted to state, however, without the least intention of detracting from the merit or originality of his ideas, that I had entertained the opinion I have now advanced with respect to fever long before I had the pleasure of reading his valuable work; and am much inclined to suspect, that our ideas on this point are not exactly the same. He says, for instance, in his preface, page 13. "The doctrine here contended for, namely, that fever consists essentially in topical inflammation of the brain, or its membranes," &c. is an aberration from the sentiment I am disposed to adopt. I believe it to be an affection of the brain itself, wholly and solely, and no more connected with the membranes of the brain, than the pleura, or peritonæum; and I am surprised that such an accurate reasoner should be led to entertain an opinion so repugnant, as it appears to me, to the conclusion he wishes to establish. I agree with him, that all the phænomena of fevers, and of all fevers, are referable to a disordered state of the brain; but not to the

the question for the present, I content myself with observing, that the functions of the brain in fever are certainly disturbed, and that organ rendered incapable of supplying the nervous fluid which the Stomach is accustomed to receive. Now the actions of the Stomach, as well as every other part, being dependent on nervous influence, for want of it the secretion of the gastric fluid is diminished, and

membranes of the brain, which are no more connected with the functions of that organ, than the peritonæum with the secretion of bile, or the pleura with the office of respiration. I think, too, he is unfortunate in having attempted to prove that fever is an *inflammation* of the brain, since he is obliged to admit, that the treatment which on this supposition might naturally be employed, (bleeding in particular) is not that which is most certain to succeed; and the evidence afforded by dissection is likewise very unsatisfactory, the appearances in favour of this doctrine being only occasionally found. I could adduce many facts in opposition to the idea of fever proceeding from *inflammation* of the brain, were it not irrelevant to my present purpose; I content myself, therefore, with one. Fever sometimes comes on suddenly and violently, sometimes in one hour, or even in a few minutes complete stupor and prostration of strength take place; does inflammation ever arise instantaneously? I have seen instances in which, after great coma and delirium, the patient has suddenly awaked as from a dream, called for something to drink, and appeared revived, but expired in a few hours. Does this correspond with the character of inflammation?

in some instances seemingly destroyed, and this state extends to the mouth and fauces, the tongue appearing parched and dry.

Viewing it in this light, we see clearly why all attempts to throw in nourishment into the system are at this time injudicious, the process of digestion being suspended. The French physicians were wont to recommend beef-tea to patients in a fever, and though it was generally rejected by vomiting, the same was repeated, though to the obvious aggravation of the disorder.

When a fever is subdued, the appetite frequently returns with great keenness, but the prelude to this is *always* a return of moisture about the mouth, the edges of the tongue becoming clean and florid; the restoration of the actions of the Stomach is often the first symptom of convalescence, and a practitioner who carefully attends to it, may often gain great credit by predicting the recovery of the patient from that moment.

It is fair to infer, then, from what has been said, that a loss of appetite, as well as other morbid conditions of the Stomach, may depend upon some cause unconnected with that organ.

What degree of satisfaction the opinion now advanced may afford to the reader, I am at a loss

to determine ; but the great error with many practitioners, and I fear I may say with the majority, is, acting without principle : thus one recommends the mistletoe of the oak for the cure of epilepsy, another the nitrate of silver, without enforcing the necessity of scrutinizing into the cause, and giving some rational idea of its modus operandi. One recommends opium for spasms of the Stomach, another a glass of hot water, a third the oxyd of bismuth, disregarding that, which is of all others the most important consideration, the cause that gives rise to the complaint.

In making these remarks, I disclaim all idea of personality ; and am only intent on establishing the propriety of furnishing ourselves with some principle of action.

In the application of that which I have now assumed, an explanation is given of many striking phænomena of hunger and digestion.

Some have been inclined to consider hunger to be the effect of a sympathy subsisting between the Stomach and the system ; others have attributed it to the corroding quality of the gastric fluid on the coats of that organ ; but neither of these opinions will bear the test of examination. On many occasions the body may be observed to waste considerably, but the appetite does not improve

improve as a necessary consequence of it. Under fever, as already mentioned, and when children are cutting their teeth, the body is often reduced almost to a skeleton, but hunger is not found to accompany it.

If a person use moderate exercise in the open air for a certain time, his appetite for food may increase; but if he continue that exercise till he is very much fatigued, he will become sick and faint, and have no inclination for food at all.

That it is not owing to any corroding quality in the gastric fluid, is equally susceptible of demonstration.

A person who is habituated to dine at a certain time, if he fast longer than usual, instead of finding his hunger increase, as might naturally be expected if this idea were correct, perceives it to subside; how could this happen, if hunger were owing to the acrimony of the gastric fluid? A more satisfactory explanation appears to me to be this:

At the usual hour of refreshment, the nervous fluid is directed to the Stomach in peculiar abundance; this, by long habit, becomes almost a law of the system, and this is the moment of excitement; but this opportunity being neglected, the nervous energy subsides, or is diffused throughout the body, and the appetite fails.

Where habit has not thus gained an ascendency over appetite, the sight of food occasions an immediate secretion of nervous fluid; hence the expression *the mouth waters*; which is perceptibly realized in dogs, who discharge a considerable quantity of saliva when stimulated by the sight of food after long fasting.

The painful sensation attendant on hunger, is owing to the contraction of the fibres of the Stomach, and this varies according to certain circumstances, some of which it is in our power to controul.

A person of a strong constitution would suffer more from hunger, both with respect to degree and continuance, than one of a more delicate frame, for the contraction of the Stomach would be greater in proportion to his strength.

The pain of hunger, when violent, is not a constant uniform pain, like that which proceeds from inflammation, but a spasmodic contraction that occasionally diminishes and returns, till it wears out the strength, and leaves the individual at length free from pain, in a state of extreme debility previous to his dissolution.

The acute pain of hunger is naturally increased by exposure to the cold air, a circumstance that might on some occasions be happily applied.

When

When Capt. Bligh was exposed for several days and nights without provision, in an open boat at sea, the pain he suffered from hunger was, according to his own description, insupportable for the first six days; and in the colder latitudes the sensation of hunger is much more intense than in warmer climates, owing, as I am disposed to believe, to the greater quantity of oxygen contained in the atmosphere.\*

In the latter stage of consumption, when the oxygen may be supposed to come into more immediate contact with the ulcerated surface of the lungs, the appetite is frequently voracious, though in the earlier, or tubercular state of the lungs, a loss of appetite is one criterion of the disorder. Where people are placed in such situations,

\* From the experiments of Ingenhouze, Beddoes, and several other philosophers, one might be led to suppose there could be no difference with respect to the quantity of oxygen contained in the atmosphere in any part of the globe. Air brought from the coast of Africa, having been found to be composed of oxygen and azot, in the same proportions, as air from a northern latitude: this, in my opinion, only serves to shew, that these airs are chymically combined, and that atmospheric air admits of no variation in this particular. It is very easy to conceive, however, and from many circumstances strongly to be presumed, that the quantity of oxygen diffused throughout the air, and not entering into chymical union with azot, is very different in different situations.

then, that famine is inevitable, the pain of that dreadful calamity would be considerably subdued by confining them to a close confined apartment.

And here I might take occasion to introduce a few remarks for the purpose of shewing the utility of this principle in its application to practice.

Suppose a person to be found in a situation of extreme hunger and debility, what food should be given to him? Perhaps instead of giving solid animal food, a practitioner would recommend a little warm beef-tea, or some light panada; if he do this without knowing why, it is evident that he is only right by chance.

But the principle I have laid down gives us to understand, that a person in such circumstances being robbed of his nervous energy, is *of course* rendered incapable of digesting such food as require much digestive power. Solid food, or even a superabundance of food not very solid, thrown in at this juncture, may produce death; and it may be advisable to administer some warm cordial in the first instance, previous to the use of food, in order to recal the nervous fluid to the Stomach, which has been known to return with so much impetuosity, as to produce instantaneously a canine appetite.

Under circumstances much less formidable than those now enumerated, the same principle may be advantageously applied; for the same reason it is objectionable for a person to sit down to a hearty meal immediately after any great exertion, either of mind or body. Those who are of a delicate appetite and a feeble frame, find themselves much oppressed at the Stomach by dining at a late hour, and are apt to fall asleep. A person who spends the morning in study, or in some sedentary or literary occupation, should make a rule to walk briskly for half an hour before he dines. But the man who comes home fatigued by bodily exertions, especially if he feel heated by it, should throw his legs upon a chair, and remain quite tranquil and composed, that the energy which has been dispersed to the extremities may have time to return to the Stomach, where it is now required.

I have been led to expatiate on this subject from a conviction of its importance, and though I am aware that to many it may appear fanciful and imaginary, those who will reflect upon it will find the value of its application.

“It cannot be questioned,” says Dr. Clutterbuck, “that great advantages in regard to practice must always accrue from a just theory respecting the nature and origin of diseases; it seems to guard us against the employment of superfluous and fre-

frequently hurtful remedies, and if it hold out no new, nor more successful means of cure, it at least teaches us a more precise and advantageous use of those already in our hands, while the want of it leaves us in doubt and uncertainty respecting the real powers and effects of remedies, and leads us often to the empirical and indiscriminate employment of those of various and opposing tendencies.”\*

This is the language of a man of sound sense and sober understanding; but there are a set of men who found their pretensions to wisdom on their readiness to scout every thing that cannot be proved by mathematical demonstration, not considering that the nature of the subject may preclude the possibility of attaining to any stronger evidence than reason and analogy can supply.

\* Vid. Dr. Clutterbuck’s Inquiry into the Seat and Nature of Fever, page 226. Part I.

## DIGESTION.

MAN has the privilege of possessing digestive powers capable of subduing vegetable and animal productions; and as the fluids of the body do not appear to possess any remarkable properties descriptive of the food on which he feeds, it has been an object of great curiosity to ascertain by what process substances so different could be made to yield similar products.

Some have attributed it to solution, some to trituration, and others to fermentation; each opinion has been strenuously defended, and supported by plausible arguments, but the error of the arguments has consisted in attributing to one operation a series of effects to which it could only in part contribute.

From the experiments of Reaumur, Spallanzani, and Stevens, we should be induced to infer, that Digestion was a process of solution, and the gastric fluid the solvent by which that object was effected; but whether we attribute it to solution, or admit that it is produced by the combined operation of all the causes now mentioned, the effect of these is only the assimilation of the solid particles of food with the solids and fluids of the constitution into which they are to be introduced.

This

This would contribute to the bulk, but not to the activity of the system: to effect this something more is necessary. By muscular motion, and the different functions of an animal body, the nervous energy is consumed, and this must by some means be restored.

To give a definition of Digestion consonant to my own ideas of the subject, I should say,

*Digestion is that process, by which the vitality of the food is separated from the substance with which it is combined.*

In offering this definition I am sensible that I lay myself open to animadversion; and if those who take upon them to examine, will combine candour with criticism, I can have no objection to the investigation of the opinion. Had I substituted the words *nutritious principle* for vitality, I should not have been amenable to censure; but the question relative to the nature of food, and its power in replenishing the exhausted strength of the system, would have remained unanswered, while the term I now have adopted conveys some intelligible idea: and though not in its nature susceptible of experimental proof, furnishes a rational and satisfactory explanation of Digestion and its effects.

That all animals, possessing the power and exercising the functions of muscular motion, are

exhausted by fatigue, and require to be renovated by food, is a fact too palpable to be denied; and it is therefore only necessary to discover in what manner food is capable of imparting this vigour to the system.

I take it for granted, no one will contend that any thing but food is capable of producing this effect, for every other stimulus acts by exhausting the vitality of the system; and though sleep affords temporary refreshment, and suspends in a great measure the expenditure which is going on, yet, without a supply of food, debility will infallibly continue and increase; food then imparts some principle by which the vital actions are capable of being continued for a much greater length of time, than by any thing to which we are accustomed to apply the word stimulus, there being this great and distinguishable difference in their effect (a difference overlooked by the author of the Brownonian system), that the one imparts vital energy, and recruits the strength, the other acting upon this vital energy produces debility.

Now, as it is self-evident that what is lost must be restored, we are drawn into a confession either that the process of Digestion is capable of forming, by a peculiar and unintelligible combination of matter, some substance capable of repairing

repairing the loss of strength and energy, or it acts by separating it from the materials subjected to its operation, and this last is the opinion I entertain.

Of the vast variety of substances adapted to the organs of Digestion in different species of animals, this constitutes the essence. Vitality is the essential part of food, and the matter with which it is combined, whether vegetable or animal, is merely the vehicle along with which it is conveyed.

That the reader may see the reasonableness of this assertion, it is essentially necessary for him to preserve a distinction between vitality and the effect of vitality, and this he will be enabled to do by the assistance of analogy with respect to heat, the matter of heat being one thing, the effect of it, or the sensation of heat another; and the facts which chymistry has clearly substantiated will, I trust, caution the reader against any precipitate conclusion relative to the opinion I now offer, which may appear to some at first sight erroneous or theoretical.

A person totally ignorant of chemical discoveries, would be very likely to laugh at any one who asserted that there was much heat in a lump of iron, or much water in a piece of dry wood, as it must appear incomprehensible to one who is not

not acquainted with the experiments by which such facts are illustrated; and unless the mind is open to conviction, we may act like the king of Siam, who dismissed the European Ambassadors from his presence, for daring to assert the incredible falsehood, that at certain seasons of the year water in their country became so hard as to admit of their walking upon it; and what would have been his opinion of these men if they had ventured to state that water, which by the difference of a few degrees of temperature acquired this solidity was but the combination of two airs? Yet all this is now admitted as unquestionable truth.

Taking these facts into consideration, therefore, I am far from trespassing on credibility in the opinion I advance, that vitality is the nutritious principle of food.

When an author brings forward an opinion which he has long made the subject of reflection, he is very apt to err in supposing what is familiar to his own mind, equally intelligible to others, and is thus betrayed into an obscurity of expression, from not expatiating on points that require more copious elucidation.

Indeed it is a difficult but desirable object to hit the medium between brevity on the one hand, and prolixity on the other; and this remark

mark I hope the reader will receive as an apology for the deficiencies of proof, or the redundancies of expression.

If we endeavour to account for the operation of food on any other principle than this which I have assumed, we shall find ourselves much embarrassed by contradictions: thus some have considered mucilaginous matter as that which supplies nourishment and imparts strength, but observation condemns the theory, for the most mucilaginous vegetables convey very little nourishment comparatively with animal food, in which there is scarcely any mucilage at all.

Others assert that saccharine matter abounds with the principle of nourishment, and support their opinion from its obvious power of increasing the quantity of adipose substance; as it is well known that the Negroes in the West Indies are more corpulent and robust during the sugar season than at any other time; but this is a deception, the elementary principles of sugar are, chemically examined, not very dissimilar to fat, and by the powers of digestion, the one is convertible into the other; but the augmentation of this substance is not accompanied with a correspondent increase of strength, a distinction which ought to be attended to, as the body may advance in bulk, while it diminishes in vigour.

Rejecting

Rejecting therefore these ideas as untenable, let us return to the doctrine of vitality, and if we suffer ourselves to consider it as a substance *sui generis* entering into the combination of different bodies, similar to the matter of heat, we give freedom to our minds, and afford at once an opportunity of enquiring into the laws by which this principle is regulated.

To assert that vegetables possess life, may seem to some an extravagant idea, but a little reflection will reconcile it to reason; for all substances which grow by the operation of their own internal powers possess life, growth being the effect of certain actions produced by life; and the vitality that gives animation to the seed of a vegetable, is the identical matter which is transferred through the medium of the digestive organs to the constitution of animal bodies. I could adduce a multitude of facts, in support of this proposition, from the phenomena of vegetable as well as animal life, if I thought it stood in need of confirmation.

Man, in common with every other terrestrial animal, derives sustenance from the earth, either by consuming the vegetable productions it supplies, or by devouring those animals who make them their food. When the vital principle is transferred from vegetable to animal matter, it is

considerably condensed, and hence it is unexceptionably true, that animals of the graminivorous tribe require abundantly more food and more frequent repetitions of it than the carnivorous. Considered abstractedly, then, we may confidently state that animal food contains more nourishment than vegetable, but the quantum of nutritious matter contained in any specific substance affords no ground of predilection for its use, it being only so far nutritious, as it is amenable to the action of the digestive organs; and this idea has been long ago inculcated in the plain but expressive proverb, "that what is one man's meat is another man's poison."

If the food taken in is of such a texture that the powers of the Stomach are not capable of extracting the nutritious principle; or, in other words, if the tenacity with which it attaches itself to the substance thus taken in, is greater than that with which the vitality is attached to the Stomach itself, such food always disagrees, producing nausea, heaviness, vomiting, and sometimes death: hence the necessity of culinary processes, which, by diminishing the tenacity or destroying the texture of our food, facilitates its digestion.

"No food," says Dr. Fordyce, "is in itself wholesome or unwholesome, but as it is compared

pared with the present state of the Stomach, and other organs of digestion.”\*

“ He that should ask,” says Van Swieten, “ what food is wholesome, might as well ask which is the best wind, without saying whither he is bound.”

“ Indigested food,” says Sanctorius, “ by how much the more nourishment it contains is so much the worse, because it occasions either a greater increase of weight, or degenerates into a greater corruption.”

This is the reason why certain substances, not very different in their external appearances from those we eat, are universally abandoned.

It may be asked, why do we not eat dogs, foxes, rats, asses, &c. not because it requires the sanction of fashion, but because the Stomach is incapable of extracting their nutritious principle.

They are therefore, in common language, said to be too strong for the Stomach.

I am aware that instances can be found of people during a siege having been obliged to eat this kind of food, but what may have been occasionally done under very peculiar circumstances of fasting and famine, cannot be alleged as a ground of argument for ordinary purposes.

\* Vid. Fordyce on Digestion, p. 176.

The explanation already offered will best illustrate the effects which ensue from eating fish. Oysters when quite alive, and eaten immediately on a shell being opened, are to many a very invigorating repast; but when not quite alive and healthy, no fish is more likely to disagree: and besides it might be mentioned, that oysters so putrid as to produce violent sickness and vomiting in the delicate habit of an European, would be eaten by a Russian with peculiar relish and satisfaction.

Mr. Thomas, in his description of fish in certain parts of the West Indies, informs us, that at different seasons of the year the same fish is both poisonous and nutritious; when poisonous, it acts by robbing the Stomach of its vital principle; if it does this in a slight degree, nausea and vomiting are the consequence; if in a more considerable degree, death, and that sometimes suddenly.

Hence a very common cause of typhus fever, mentioned by authors, “*victus pravus et putridus;*” and whoever will investigate the cases which occur of this description, will be convinced that it is a very prevailing cause of typhus among the lower classes in this metropolis.

“ Undigested animal food,” says Dr. G. Fordyce (in his Treatise on Digestion), “ may putrify while

while it remains on the Stomach, and by its operation produce fever, which has been called violent, putrid, malignant, &c. of which I have known more than one instance."

The effects of putrid diet have been observed on animals. Thucydides tells us, that when the plague raged at Athens, and multitudes of bodies lay unburied in the streets, the carnivorous birds, who impelled by hunger gnawed these bodies, very soon expired.

A German writer informs us, that during the prevalence of the plague at Vienna in 1713, it was observed, that flies which sipped the blood of an infected person instantly expired.

It is in this manner those substances produce their deleterious effect, not from any peculiar acrimony, or from any sedative or narcotic principle, but from their power of robbing the Stomach of its vitality. For the same reason animals, which are destroyed by lightning when in perfect health, are unfit for food, because it is well known that when death is produced by this means, putrefaction takes place with uncommon rapidity.

Thus the mighty mystery with regard to most poisonous substances may be unravelled, and the more it is examined, the more will the evi-

dence of facts be found to coincide in favor of it.

The mildest article of food, if this opinion be correct, may prove pernicious on certain occasions.

Thus, when a person who has lain ill of a fever for some weeks begins to feel a return of appetite, the greatest care is necessary in gratifying his wishes not to exceed the capacity of his digestive powers; for if nausea ensue, and his fever return, he will infallibly die after such a relapse.

Like a fire just kindled, a little fuel would increase the flame, but a superabundance would extinguish it.

This, it may be said, is not a fair illustration, because in this instance the body is already weakened by disease, but the effect is the same when no cause of debility has preceded.

Mr. Everard Home, in a little paper on the Stomach, recorded in the Philosophical Transactions, says, "I have known an instance of a child three years old, who being left alone at dinner ate so large a quantity of apple-pudding that it died, which raised a suspicion of its being poisoned. On examination after death, the whole Stomach was distended to its utmost extent,

tent, and rendered quite tense, which was the only apparent cause of the child's death."

Morgagni relates the history of a woman forty years of age, who having eaten onions preserved in salt and vinegar, with bread made from the meal of chesnuts, began immediately to complain of pain in her Stomach, which growing more and more violent, at the end of three hours after eating this meal, she died in cold sweats and a fatal syncope which had seized her.

The body being opened on account of a suspicion that she had been poisoned, every thing was found to be in its natural state, except that the Stomach was distended to a very great degree.\*

Bonetus likewise in his Sepulchretum states the case of a boy who died in three hours from eating immoderately of grapes; and Etmuller furnishes an instance of one who having eaten a melon boiled with milk, and afterwards drank cold water, died suddenly in a few hours.

It would be an endless task to enumerate such cases.

From what has been advanced, it is obvious that the appetite for food is a natural instinct which ought to be consulted rather than directed.

\* Vid. Morgagni's Morbid Anatomy, Lett. 29. Art. 8.

It is an instinct which, independent of reason, teaches us what to renounce, and what to prefer; and we seldom eat what is pernicious, without feeling an inward conviction that the Stomach does not approve it; hence this organ has been emphatically denominated *the Conscience of the Body.*

The first impression of putrid food is made on the sensorium through the medium of the olfactory nerves; and it is a curious circumstance, that in all animals the nose is placed in close proximity to the mouth, undoubtedly for the purpose of bringing the food under the examination of this sense.

I have detailed these facts relative to Digestion as illustrative of the truth of the position, that

*Digestion is that process, by which the vitality of the food is separated from the substance with which it is combined.*

But as a variety of secretions are provided by nature for the completion of this important function, I now proceed to the consideration of their properties; and first of the

### SALIVA.

THE quantity of Saliva conveyed into the Stomach, varies according to the nature of the food taken

taken in; the act of mastication alone promotes the secretion, and much is required and supplied in chewing a crust of bread.

This fact has induced some persons to recommend the use of it in the morning: and Dr. Robinson, who wrote a treatise whimsically called “A Treatise on a Crust of Bread,” esteems it a very salutary practice.

It is not easy to state what quantity of this fluid is daily secreted on an average, there being no method by which we can form a calculation: hence the assertions of authors have been vague and contradictory. “Many physiologists,” says Dr. G. Fordyce, “have considered the Saliva as secreted in very large quantities during the deglutition of the food, but I can hardly be of that opinion; *as far as I can judge*, the secretion during a meal can hardly exceed an ounce or two, and I should think that it serves only to lubricate the passage through which the food is to pass;” but he adds, “it is true the great apparatus of the parotid and submaxillary glands, which is employed as well as perhaps some smaller glands which open into the mouth, gives the idea that something very material is to be obtained from the effect of this fluid.”\*

\* Vid. Treatise on Digestion, p. 22.

This opinion of the quantity of Saliva formed, is not acceded to by every one.

Dr. Arbuthnot, on the contrary, asserts without hesitation, that “he who eats a pound of bread swallows at least as much spittle as bread.”\*

Boerhave in his Academical Lectures, speaking of Saliva, says, “the quantity separated and discharged into the Stomach in a day, is estimated to be about twelve ounces, which is entirely swallowed by people in health, but the Saliva will appear to be separated in much larger quantities, if we add that which is mixed with the food and passes into the Stomach, to that which may be spit out in a certain time;” and to convey an idea of the value of this secretion he remarks, that “the same blood which affords the most subtle fluid of the nerves in the brain, does also yield the Saliva.” An observation this well entitled to attention.

In addition to these it may be stated, that the degenerated, or depraved state of this secretion manifestly produces the most serious effects when introduced into the blood, as Hydrophobia too forcibly proves.

I have heard it remarked by Dr. Cleg-horn of Glasgow, that when an old Negro is

\* Vid. Arbuthnot on Aliment, p. 7.

exasperated, and bites his antagonist, the effects of that bite will continue to disorder the system for years afterwards. These facts leave us little room to doubt that a fluid, some of whose properties we know to be so peculiar, is no indifferent agent in the process of Digestion: this may explain a circumstance which must have come under the cognizance of every person conversant with practice, I allude to the effects of salivation.

When a person has used mercury for some weeks, and stimulated the salivary glands to immoderate action, the patient for a long time afterwards continues to feel a great loss of appetite and indigestion, the tongue being covered with a thick white fur, and continuing in that state for weeks, the glands being over-stimulated, and thus rendered incapable of supplying for some time the proportion necessary for the wants of the constitution.

As to the chymieal properties of this fluid, or the competent parts into which it may be separated by analysis, I do not feel it essential to enquire; for it throws very little light on the influence it has on the animal œconomy; it may be well to remark, however, that it is said by Saunders, Thomson, and others, to have a great affinity for oxygen.

Dr.

Dr. Bostock considers the viscosity of this fluid to depend on mucus, which constitutes, he thinks, about one half of its solid contents: it contains likewise phosphate of soda, of lime, and of ammonia, but by far the greatest part of it is water.

Of a fluid thus abundantly supplied, and from vessels so immediately in contiguity with the brain, the advantages to the constitution must be considerable.

When it is wantonly consumed, as by smoking or chewing tobacco, it frequently impairs the appetite; hence on the first introduction of tobacco into Europe, it was extolled as a remedy for hunger, and must be prejudicial therefore to hypochondriacal people, who cannot afford to part with that which contributes to Digestion.

Besides the influence, however, which we must suppose the Saliva has in this respect on the system, there is another function which, as far as I know, has been very little attended to, I mean its functions as an excretory fluid.

By what means, or through what channel of communication, a matter obnoxious to the system can be conveyed to the salivary glands, we can no more explain than we can the nature of metastasis, or the transition of matter from one part of the body to another: this will not warrant

rant us, however, to disregard the fact, for we know very well that the secretion from the soles of the feet being checked may affect the head, and the repulsion of an eruption on the skin produce sickness at the Stomach.

So likewise in some instances it is obvious, that the Saliva itself shall become a critical discharge, and carry off from the system a matter which has been unseasonably checked in some other part.

### CASE.

A lady whom I am well acquainted with, lay-in of her second child, and experienced no particular difficulty in her labour; she is of a delicate constitution, and had been subject, on slight irregularities, to a discharge of the fluor albus.

For two or three days after her confinement she continued very well, and had a free discharge of the lochia. She was recommended to take bark and other astringents, but whether from these, or, what is more probable, from accidentally taking cold, the lochia was suddenly checked, the head became affected with stupor and giddiness, and the face swelled.

This was presently followed by a very copious salivation, which continued for several days.

Opening

Opening medicines were now recommended, and relaxants at night; the lochia was thus brought on, and the salivation immediately disappeared.

### CASE.

A young man consulted me a short time ago, whom I visited in company with Mr. Evans, Surgeon, in Old-Street; he said he had had a chancre on the penis six months before, and used mercury then for a few weeks *only*, but not to such a degree as to produce any sensible effect upon the mouth.

On examining the inside of the fauces, a very general and deep-seated ulceration was observable on the uvula and tonsil glands, and a profuse salivation to the amount of *two quarts a day* attended it, without the least mercury, as he positively assured us, having been used since the above-mentioned period. As this gentleman's constitution appeared to be considerably enfeebled, and his habit scrophulous, we thought it adviseable to give him first a gentle emetic, and afterwards bark; we adopted this plan, but without effect, the spitting still continuing, and the ulceration extending its ravages. We now employed mercurial ointment in the usual manner, and after rubbing in on the thigh two drachms

of

of mercurial ointment for three nights, the *spitting considerably diminished*, and the ulceration rapidly healed; after this time the spitting continued in such a moderate degree, as might naturally be expected to arise from the ointment itself.

From this and many similar cases which occasionally occur, we may conclude, that the Saliva frequently becomes an excrementitious fluid, conveying something out of the body which would prove noxious if it were retained; and therefore we may on some occasions recommend the smoaking of tobacco.

I remember reading in one of the Medical Journals, the history of an old woman in Scotland, aged 104, who was in the constant habit of chewing this herb, and felt the greatest languor and lassitude if she discontinued the use of it only one day. We often find persons assert, that smoaking *clears the chest*, and brings the phlegm off the Stomach; I can only account for the beneficial effects which occasionally attend this practice on the principle already mentioned.

## OF THE BILE.

THAT the Saliva is an agent in Digestion, or at least that its presence does not interrupt that process, is a fact so palpable that no one, I believe, ventures to deny it.

With respect, however, to the operation of the Bile, few are disposed to adopt a similar opinion; and what I now propose to advance relative to this substance will, I am aware, appear very erroneous to those who are accustomed to consider the Bile as a mere excrement, or as principally contributing by its action on the intestines to promote the expulsion of the fæces out of the body.

This is the opinion of a late author of considerable celebrity, who, in a work on Diseases of the Liver, says of the Bile, "its principal office is that of a natural and habitual stimulus to the intestines, keeping up their energy and peristaltic motion."\*

That it does perform an office of much greater importance, that it contributes more probably than any other fluid to the process of Digestion, and that from the defect, and not the re-

\* Vid. Saunders on Diseases of the Liver, 4th. edit. p. 151.

dundancy of it, the most pernicious consequences ensue, I trust I shall be able to prove to the satisfaction of those, whose understandings are not blockaded by prejudice.

If I fail in the attempt, it must arise from my not possessing in a sufficient degree the power of elucidation; as a person may feel the most forcible persuasion of the truth of an opinion, without being able to explain to another the grounds of his conviction.

The first circumstance to be attended to relative to this secretion, is, that it is formed not from arteries like the Saliva and other fluids, but from veins, from blood which, having already undergone a change in the course of circulation, is returned in a state similar to venous blood.

This change is essential to its properties; nor has it yet been ever *proved*, that Bile has been formed from any other materials, excepting those which venous blood is capable of affording.

The only thing like an exception that I have ever met with on medical record, is the case described by Mr. Abernethy, in which *it appears* that Bile is formed by the hepatic arteries, and not from the branches of the vena portarum.

Now this, though a solitary fact, would be entitled to considerable attention, and would be

sufficient, perhaps, to overturn all our physiological conclusions, if it were clearly and incontrovertibly true; but without intending to invalidate the accuracy or credibility of that gentleman, for whom I entertain the highest respect, I feel it due to the interest of science to state, that I have conversed with one, who has had the best opportunities of examining the preparation which exhibits the phænomenon, and have been informed that the appearances were not such, as to preclude the possibility of doubt.

Besides, it appears from the history of this singular case, that the gall-bladder was very small, and the quantity of Bile contained in it only *half a tea-spoonfull*, and this less acrid, less bitter, and less nauseous than common Bile.

Admitting, therefore, that there could be no deception with regard to anatomical structure, surely these are circumstances to which scepticism might fairly appeal for an apology. Besides, the subject of this peculiarity only survived one year; and, as Dr. Saunders has judiciously observed, "it is not improbable, that although the subject of this singular conformation of the hepatic system appeared well nourished, yet that the unusual structure may have been either primarily, or secondarily, a cause of its death."

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Considering, therefore, that this fact is supported only by questionable proofs, that it is unprecedented in the annals of medicine, and that it is repugnant to the accredited and established laws of the animal œconomy, I trust I am still justified in asserting, that Bile is only formed from venous blood.

I should be entering into the regions of theory, were I to attempt an explanation of the change which the blood undergoes previous to its entering the vena portarum; and as the doctrine I now propagate relative to the use of Bile in digestion, is of itself liable to opposition, I think it prudent for the present to suppress what I conceive to be a feasible opinion on this head.

I proceed, therefore, to maintain, that the Bile is an important agent in digestion; and to prove this, I may in the first place mention, that whenever the secretion of this fluid is diminished, the functions of the Stomach, and the process of Digestion, are deranged.

I shall adduce a Case, not from any remarkable peculiarities attending it, but merely as descriptive of my meaning: it is such as every medical practitioner must have frequently seen, and therefore more valuable as an illustration, since it enables me to convince the reader by a reference to his own experience.

## CASE.

M. D. aged 55, or thereabouts, complained of a short dry cough for several months, with entire loss of appetite for nearly the same period; the countenance looked somewhat emaciated, but had no particular sallowness; and the urine, though deficient in quantity, exhibited no morbid appearance.

This patient (a female) was very much troubled with flatulence, and when I saw her, was much distended by a dropsy of the abdomen, and anasarcaous swelling of the legs; she had drank considerable quantities of spirituous liquors, which had impaired her constitution.

I omit, for the sake of brevity, the detail of the treatment, which did not of course prove successful: the woman died, her body was examined after death, and it was found that the whole substance of the liver was knotted and tubercular, extremely hard, and of a whitish colour; not the least Bile was found, and no traces of a gall-bladder could be discovered. This is a peculiarity not commonly met with. The Stomach was cut open and carefully examined, but presented no appearance of disease.

Here is one instance, then, of impaired appetite from defective Bile; in this case the whole sub-

substance of the liver was so completely indurated, that nothing like Bile could be formed, and this probably was the reason that the countenance exhibited no jaundiced appearance.

Whenever we perceive jaundice in the skin, or in the eyes, when the yellow colour is very predominant, we may be assured the liver is capable of forming Bile, and that it has been first formed, and then absorbed: it accords with my experience therefore to state, that in general these were the most curable cases, and arise from causes more manageable and accidental.

Without any discolouration of the skin, the liver may be very much impaired both in function and structure, and dropsy take place in consequence: in proof of this I could adduce some very interesting cases, which have come under my observation, were it not digressing too much from the object before me. As far as one fact can tend to corroborate an opinion, this which I have now mentioned is conclusive, there being no apparent fault in the Stomach, but entire loss of appetite, from the total absence of Bile.

That it proceeds from this, and not from any sympathy between the Stomach and the liver, is certain, because the obstruction to the passage of the Bile by a gall-stone, without any disease in the liver itself, produces a similar effect.

It is fortunate for the support of my opinion, that what I now advance is not confined to my own personal experience; and I appeal to every one who reads and practises for the confirmation of what I say: if, therefore, it be true that the absence of Bile does impair the digestion, the converse of the proposition is most likely to be true also.

When a person, in maintaining an opinion, draws an inference from something which once happened, but can no longer be repeated, the ground of his arguments may very fairly be called in question.

Instead of attempting to inveigle the approbation of the reader in this manner, I recommend him to examine the truth and accuracy of my assertions, by a comparison with his own experience; and having asserted the absence of Bile to be the great cause of indigestion, I submit the following proposition to the same test of examination, that *Bile in the Stomach is a very powerful stimulus to hunger.*

I suspect this paragraph will strike the reader as very heterodoxical, and he may perhaps exclaim, How can this be true? do we not often meet with cases, where people have every appearance of being bilious, where loss of appetite, nausea, and vomiting, are the predominant

nant symptoms; and is not the tongue white and covered with a kind of whitish crust? In addition to these, does it not often happen, that large quantities of Bile are thrown off from the Stomach, to the immediate and effectual relief of the patient?

These are very reasonable interrogatories, and such as I feel it incumbent on me to explain, if I expect to gain proselytes to my opinions. I begin with the first question, by considering what are the symptoms, from which we are led to say a patient is bilious.

They are those: a sallow complexion, yellowness in the white of the eye, and a little tinge of the same colour around the temples; great languor and lassitude, a disrelish of animal food, and a partiality for vegetables of the acescent kind, drowsiness, giddiness, a white tongue.

Some or more of these are generally found to accompany the loss of appetite, nausea, &c. already alluded to; now all these symptoms, I most decidedly affirm, originate, not from the presence of Bile in the Stomach, but from its absence, and from its retention in the circulation. This I think cannot reasonably be doubted by any person who will take the trouble to reflect upon the subject; and of those who do doubt, it will be found that their practice is in opposition to

their opinions, for it is agreed, that the most effectual means of relieving these symptoms, are vomiting and purging. We give calomel to emulge, as it is often expressed, the biliary ducts; what is the effect of this, but to encourage the discharge of Bile from the liver into the duodenum? But the symptom which most frequently gives rise to erroneous conclusions relative to this point, is the appearance of the tongue.

*A white tongue.* When a person is attacked with fever, the surface of the tongue very frequently exhibits a morbid appearance, in some being white, in those of the more malignant kind, or towards the decline of the disease, brown, and sometimes black: hence many are disposed to consider this change as an indication of fever; and so prevalent is the notion among the public in general, that, when you ask to see the tongue, the answer frequently is, I have no fever.

But this state of the tongue is merely accidental; it is by no means essential to fever, since it is very often found where fever does not attend, and frequently in the most severe attacks of that disease, the tongue exhibits no discoloration at all.

I know a person who has for several years been engaged in a large white lead manufactory; his appetite has long been imperfect, attended with constipation

constipation of the bowels, and his tongue continually covered with a complete whitish incrustation, but without either fever or thirst. This variation in the appearance of the tongue may be easily explained, for as fever may attack a person under different states of the system, it is that state of the system, and not the fever itself, on which the appearance of the tongue will depend.

But the error to which I now make an allusion is this, that when the tongue is white, the patient is supposed to have Bile in the Stomach; this I have repeatedly witnessed, and have seen calomel, rhubarb, jalap, &c. often recommended with the *professed intention* of carrying the Bile out of the Stomach, and I avail myself of this point to convey the distinction between my own sentiments, and that which I believe to be the general one. I say, that in this case, the whiteness of the tongue proceeds from the *deficiency of the Bile*, in the primæ viæ.

The facts which I shall presently adduce will bear me out in this declaration, and therefore I proceed to explain what certainly seems to be the most plausible objection to the doctrine, *that large quantities of Bile are thrown off from the Stomach, to the immediate and effectual relief of the patient.*

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There are two ways of explaining this; in the first place, there is great room for deception with regard to the fluid itself: if a large quantity of watery fluid is thrown up by vomiting, as is frequently the case in certain diseases, should this chance to be tinged with Bile, it is rashly concluded that this is a large quantity of Bile rejected by the Stomach, though, could it be properly investigated, a very small portion indeed might be found to be Bile, which, like blood, is capable of imparting colour to a large quantity of fluid.

There is great reason to believe, that this is a very common error; for the secretions from arterial blood, as in the saliva and pancreas, are much more likely to be increased than the secretion from the liver, where the circulation is necessarily slow; and let it be remembered, that in ninety-nine cases out of a hundred at least, in which such a thing happens, we have only the *ipse dixit* of the person, who pronounces merely from the inspection of what is thrown up, and not from any chymical examination of the subject.

This is one way of explaining it, but let us admit, however, that what is thrown up under such circumstances is really Bile, the idea I have entertained of its action still remains unrefuted; for

for in these instances it is not the cause of vomiting, but the effect; this is proved most unequivocally by various facts, but especially by the passage of gall-stones; for when the duct is obliterated by the passage of a gall-stone, nature endeavours to facilitate its progress by exciting vomiting.

Now mark the concluding part of the paragraph, the rejection of Bile *produces immediate and effectual relief to the patient*. This is certainly true, for it will almost invariably be found, that when by vomiting Bile is brought up, benefit is obtained.

I wish particularly to confine the attention of the reader to this point, as it materially tends to prove what I assert, and I would ask him this plain question, Has he not frequently known persons seized with sickness and vomiting, and continue to vomit for some time, without any salutary effect? has he not, in consequence of this indication, (for to follow the indications of nature is the great merit of a physician) prescribed an emetic, and if this operated so briskly as to bring off a quantity of bilious matter, has not the most effectual relief been obtained?

This I have repeatedly observed. Now if the sickness and vomiting had proceeded from the Bile in the Stomach, it is scarcely possible to

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conceive that it should not have been rejected at first; yet we often see the most violent efforts to vomit, long before any Bile makes its appearance.

When it does make its appearance, and when by this circumstance we have the strongest proof that Bile is thrown from the duodenum into the Stomach, it almost always will be found that the nausea vanishes, and a sense of hunger supervenes.

We see this strongly exemplified by seasickness, in which case the patient immediately after vomiting feels a voracious appetite; he eats, and again rejects what he has eaten, and feels the same sense of hunger return: this is only the case when the vomiting is so powerful as to force out Bile into the Stomach.

Now, before I proceed to the proofs which I have still in reserve in confirmation of my opinion, I beg leave to make a few remarks on the practical inferences to be drawn from this view of the subject.

On the presumption that this doctrine is well founded, we know how to act with respect to the exhibition of emetics. If a patient has continued vomiting for some time, and the matter that has been thrown up is merely mucus or phlegm, we may conclude the object of nature

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is not yet accomplished, and should assist her endeavours by administering an emetic. I do not mean to say, that this would be unexceptionably proper, for a person may be already so exhausted by fruitless efforts, that any further repetitions will be incompatible with his strength: this must be left to the discernment of the practitioner, who, whilst he sees clearly the principle on which he ought to act, should have discretion enough to know how far in particular cases this principle may be applied.

We are often consulted by a patient, for the relief of whose symptoms we feel disposed to administer an emetic, but are told that he has taken one or two a short time since: this alone is no objection to the repetition of it; for if they were speedily returned, and the symptoms that indicate their use continue, we should feel at liberty to act as if they had never been employed.

Here I shall introduce the short history of a case to which I may again refer, when treating of pain in the region of the Stomach. The effects of vomiting, as I have already endeavoured to describe them, will afford the best explanation of the practice.

## CASE.

A lady, the daughter of a medical gentleman, for whose judgment and character I have the highest esteem, was for several months subject to a violent periodical pain in the Stomach, and had tried æther, opium, and different antispasmodic medicines without effect; at last her father gave her an antimonial emetic, which operated tolerably well, but not answering his expectations, he immediately administered another, which completely cured her, the pain not having again returned. This happened in a family where I spent the first four years of my professional life, so that the fact is strongly impressed on my recollection.

At that time, I had no idea of the modus operandi, nor do I believe the gentleman himself knew the rationale of his practice. Applying however what has just been said on the influence of the Bile, the explanation corresponds with the effect. To return to the action of the Bile on the Stomach.

In addition to what has been observed, it may be mentioned, that when the liver has been rendered torpid in its actions by drinking spirituous liquors, such persons have an impaired appetite, are subject to spasms at the Stomach, and occasional

vomiting of Bile; whenever this vomiting occurs, the appetite is revived. I relate the following Case as an example, though it presents other peculiarities not immediately applicable to this point:

### CASE.

E. C. was admitted a patient under my care at the London Dispensary; the description she gave of her complaint was this:

About two months ago she was suddenly seized at seven o'clock in the evening with a pain in the Stomach, which flew to her head; the pain seemed at first (to use her own expression) more like a stagnation: the next morning a general swelling came on over the face, hands, and lower extremities, and black spots made their appearance on the thighs and different parts of the body. She had formerly, by her own confession, indulged very freely in the use of spirits, and used to be seized with a vomiting of Bile every week, though for three weeks previous to this attack, that symptom had subsided.

The vomiting of Bile was preceded by a quantity of phlegm, and *always followed by a strong sensation of hunger*. Before this last attack she felt great drowsiness; and a week previous to its approach discharged copious black stools:

*her*

*her appetite, when she does not experience these bilious vomitings, is very indifferent, and absolutely rejects meat and butter: the latter immediately turns oily on the Stomach, and comes up like suet, or passes through the bowels unchanged.*

I suspect in this instance the presence of gall-stones, but whether this be the case or not, it serves to prove the position relative to the operation of the Bile.

I have many cases on record which tend to give additional probability to the same thing, but think it unnecessary to trespass on the reader's attention by further detail.

But though what I have suggested relative to the use of the Bile is not at present generally understood, certain facts calculated to support the opinion have long since been taken notice of: indeed, it is hardly possible they should not, and I am quite astonished, believing, as I certainly do, in the truth of the doctrine, that they have not led to similar conclusions.

Boerhaave, in his Academical Lectures, speaking of this fluid, says, "The Bile even seems to be one principal cause of hunger;" and adds, what most forcibly confirms the justice of the observation, "for gluttonous men and rapacious animals have been found to have the ductus choledochus open into the Stomach." Now if this

this be true, it seems to me as plain, as palpable, and as incontrovertible evidence, as any rational person would require.

Some have imagined that a peculiar acid prevailed in the Stomach of those animals who are most remarkable for appetite, but from what this opinion originated it is not easy to conceive, as on investigation it is found not to be true.

In the Eagle, the Vulture, the Cassowary, and the Ostrich, no acid can be detected. Duverney has demonstrated the biliary duct opening into the stomach of the Ostrich.

"Vesalius," says Boerhaave, "opened the stomach of a most voracious robber, and found the biliary duct inserted into the stomach:" and Galen assures us, that people who are subject to have the Bile ascend into the stomach, are *always extremely voracious.*\*"

Can any argument be more apposite, can any experiment be more satisfactory than this? With such facts in our possession, am I not warranted in asserting, that *Bile in the Stomach is a very powerful stimulus to hunger?*

I have already expressed my surprise that the fact quoted by Boerhaave, Vesalius, &c. should have been so little regarded; and this surprise

\* Vid. Boerhaave's Academical Lectures, vol. 6. p. 5.

naturally increases on observing that the remedies which have sometimes been employed in practice, are such as would seem directly to flow from that information: for the exhibition of the Bile of other animals was long ago recommended as an auxiliary to digestion. Now they who are inclined to attribute the symptoms of dyspepsy, and other derangements of the system, to the Bile in the Stomach, will find it incumbent on them to prove, that human Bile possesses something peculiarly pernicious, for the Bile of other animals has been often given, and with the most beneficial effect.

And here I beg leave to introduce a passage from Van Swieten, whose valuable Commentaries may be considered as a compendium of the knowledge of his time. I cannot shelter myself under higher authority; and no quotation could be better adapted to my present purpose.

“ The Bile and phlegm are of so opposite a nature, that they can never predominate together, Bile being the greatest detergent, dissolvent, and attenuant of all pituitous matter. If the Bile be hindered from flowing into the duodenum, and by this means be thrown back into the blood, it dissolves it to such a degree, that after a long jaundice there usually follows a dropsy. Whenever this viscid, pituitous matter

is accumulated, the Bile is either deficient in quantity, or it is too inactive. Nothing, therefore, seems more proper in this case, than to supply the defect of the Bile, either by giving the bile of some other animal, or by the use of bitter plants, such as wormwood, centaury, &c. The former seems the most natural method, and for this reason the bile of the most voracious animals that use no manducation, nor have several of the other aids of digestion, has been chosen principally for this purpose, as in these a sharper bile than ordinary seems to have supplied the want of the other. Thus the gall of a jack, that devours fishes whole, and of eels, has been much commended for this purpose."

"Zoographers observe, that the fiercest animals have the most acrid bile, and for this reason the apothecaries keep in their shops the gall of bulls inspissated; and perhaps that most costly porcupine stone, called pedro del porco, may owe its virtue, as well as its original, to bile."\*

Here then theory and practice correspond, and a wide field is open for the physiologist and experimentalist, which, if properly cultivated, promises to be productive of the best effects.

\* Vid. Van Swieten's Commentaries on the Aphorisms of Boerhaave, 2nd edit. vol. 1st. p. 207.

It seems very strange, however, that this remedy, supposing it to possess the virtues ascribed to it, should have fallen into disuse; but as we all know there is a fashion in physic, and that one medicine is often employed in exclusion of another, not because that medicine is ineffectual, but because the new one is introduced by extravagant recommendation, and perhaps better suited to the palate: this circumstance argues nothing in proof of its inutility.

Before I relinquish this part of the subject, I subjoin a few practical remarks.

Of the property of the Bile thus to dissolve, deterge, and attenuate, as Van Swieten expresses it, there is no room to doubt; and the approximation of the pancreatic and biliary ducts in the human subject, affords strong presumptive testimony that they are subservient to each other.

Here we may seek for an explanation of the symptoms so frequently found in very young children, who are of all others most disposed to generate phlegm, and acidities in the Stomach, which are most successfully relieved either by encouraging a discharge of Bile into the duodenum, or by exhibiting substances which bear a resemblance to Bile in their composition, such as castile soap, kali, rhubarb, &c. The following Case will

will illustrate better than any abstract reasoning the symptoms I advert to.

### CASE.

A. R. a boy of two months old, was brought to me labouring under the following symptoms: a violent cough, supposed at first to have proceeded from teething, but afterwards considered to be hooping-cough, a large hardened belly, great wheezing in the breath, and an accumulation of phlegm on the chest, as manifestly appeared when the cough came on; the countenance bloated and rather livid, and an anasarcaous swelling of the hands: for these symptoms I advised five grains of calomel to be taken at night, which first produced considerable vomiting in the night, and afterwards several stools, to the great relief, and almost recovery of the patient.

This is perhaps the most common assemblage of symptoms met with in children of that age, and therefore it may be instructive to the junior part of the profession to dwell on it a little.

I have repeatedly seen this mistaken for inflammation of the chest; and I believe, because the difficulty of inspiration and catching of the breath are sometimes very urgent, the practice

founded on this idea is of course often prejudicial.

Antimonials in small doses are sometimes employed, but are exceedingly improper. I have seen three or four cases which I can confidently assert proved fatal by this means: its effect is to weaken the Stomach, too much weakened already; when it does vomit some relief is obtained, but I have known it given in large doses without exciting vomiting, and then it always proved fatal.

Calomel in these instances almost always produces vomiting, and then is most serviceable. The matter rejected is always viscid and ropy. The cough to which elderly people are so liable in cold weather, and the oppressive asthmatic symptoms attending it, as well as the remedies from which they derive the most sensible relief, are best explained upon the same principle.\*

I formerly was at a loss to conceive how an emollient medicine taken into the Stomach could act in alleviating symptoms that appeared to proceed from an irritation on the lungs of the trachea. The medicine commonly in use at the

\* I do not however mean to recommend Calomel as a medicine calculated to relieve these asthmatic affections; where the lungs are either weak or diseased, Calomel should be very sparingly administered.

Dispensary, and which never fails scarcely to mitigate their violence, is composed of ol. amygdal, kali, et tinct. opii camphorat. with some simple vehicle; its saponaceous qualities are obvious.

I conclude, therefore, that Bile is essential to Digestion; that it tempers and corrects the viscidity of the pancreatic, and probably the gastric fluid; that a white tongue is an indication of a deficiency in the secretion of it, and a proof that there is no Bile in the Stomach, or duodenum.

It is a proof that the person is bilious, but in a sense very different from what has hitherto been generally understood, that term being applicable to bilious matter, or that matter from which Bile is formed being retained in the system, instead of being secreted by the liver.

I further add, though it does not follow as an inference from what I have premised, that dropsy from a diseased or tubercular state of the liver, is not owing to the mechanical obstruction to the circulation through this tubercular part, but to the retention of a matter which destroys the cohesive property of the different component parts of the blood, occasioning the watery parts to be disengaged, and producing also petechiae, and the most profuse passive haemorrhages from the nose, and other parts of the system.

## OF THE PANCREATIC JUICE.

To pass over in silence a fluid so immediately connected with the phænomena of Digestion as the Pancreatic Juice, would imply an opinion that it had no very material share in the process. This cannot for a moment be imagined, as it is found in almost all animals; and in those in whom it is wanting, certain appendices are placed calculated to supply its office.

Bianchi supposes the use of this fluid is to afford a constant supply of moisture to the mouth of the lacteal vessels, and thus prevent their sides from coalescing together.\*

Others have thought, that it is intended to preserve the food in the Stomach in a state of proper moisture. In support of this opinion it has been observed, that birds who do not drink, not only have the Pancreas enlarged, but several ducts opening into the duodenum.

Haller's idea seems the most plausible, that it is destined to mix with the Bile, and correct its acrimony; and he asserts, on the authority of Brunner, that when the Pancreas is removed from a dog, the appetite for food is increased.

\* Vid. Bianchi Histor. Nepat. p. 93.

Hasselquist informs us, that the crocodile, whose Bile is peculiarly acrid, has a remarkably large Pancreas. That the Pancreatic Juice is calculated to combine with the Bile, and in this manner contribute to Digestion, is not at all improbable; but the difficulty of making any experiments on an organ situated as the Pancreas is, leaves us no opportunity of obtaining satisfactory information on this point.

Sylvius, and after him De Graff have asserted, that the Pancreas secretes an acid liquor; but the most general opinion is, that it is similar to the saliva, both in its properties and functions.

#### OF THE SIGNS INDICATIVE OF A WEAK STOMACH.

THE indications of a weak Stomach are numerous, and demand particular attention from every one engaged in the treatment of disease.

In enumerating them, I am not aware that there is any necessity for selection or arrangement, and shall begin therefore with that which, being the most disregarded, requires more especially to be pointed out; I mean *a florid countenance*. Nothing is more common than to hear people express their admiration of a person's health, who has a remarkably florid countenance,

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but no conclusion is more frequently incorrect. That there is a certain degree of ruddiness in the countenance not only compatible with, but demonstrative of health, I admit; and for that reason, to avoid misrepresentation, it is incumbent on me to be more explicit in defining that to which I allude as descriptive of debility.

I shall be best understood by contrasting the one with the other.

The healthy florid complexion, is frequently the effect of exposure to air: the unhealthy complexion, is often met with in persons who lead sedentary lives, and are much confined at home.

The former is a uniform and a circumscribed colour, bounded by the natural whiteness of the skin; the latter, subject from various slight causes to alteration, and diffused universally over the whole face, and sometimes part of the neck.

In the former, the colour is unaccompanied with the sensation of heat; in the latter, the face is at times uncomfortably hot to the patient, and sensibly hot even when felt by another. I have likewise observed in all the instances which at present occur to my recollection, that the unhealthy complexion is accompanied with very dark brilliant eyes, having an undefinable vivacity, as if under the immediate excitement of some exhilarating passion.

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This unhealthy complexion proceeds from different causes; it is sometimes hereditary, sometimes produced by intemperance, but more frequently of either, perhaps, produced by accident, especially drinking cold water when hot, or eating too heartily of indigestible food, such as putrid fish. When either from surfeit, or intemperance, it is generally accompanied with some eruptions on the face, and these subject the patient to the mortifying insinuations of being too much devoted to Bacchus.

It is but justice to assert, in vindication of this uncharitable suspicion, that the flushed countenance is often to be met with in the most temperate characters; nay, is sometimes the offspring of temperance. Hard drinking will produce it, it is true, but the majority of these cases, I will venture to affirm, proceed from a very opposite cause.

Great circumspection is necessary in the management of those who have the complexion now described; their peculiarities with respect to diet ought to be carefully inquired into; for even a draught of cold water to such persons would at times prove a poison.

Wine, especially port, generally turns acid: all eruptions in such persons, however trifling, are critical and constitutional, and should never be repelled.

Bleeding, under any circumstances, in these habits, cannot be resorted to without danger: even medicines of moderate activity, must be given in very small doses. The neutral salts, unless combined with warm carminatives, disagree, producing spasms, and severe griping. I know some persons, for whom ten grains of magnesia is a sufficient dose to procure three or four stools, and this is found frequently to answer the purpose of an aperient better than any other.

This may be owing to the acidity of the Stomach, with which such patients are frequently troubled; and indeed it appears to me that the foundation of the complaint is the want of a proper secretion of Bile into that organ.

I know a lady who was recommended to take half a drachm of rhubarb, which was made into eight pills; by mistaking the directions, she fortunately only took one, and this operated briskly; so that in this, as in other similar cases, an ordinary dose of medicine would be a dangerous remedy: the warm tinctures, those of rhubarb, senna, and aloes agree best; oily medicines are in general very obnoxious, and the common neutral salts too cold; they produce great oppression at the Stomach, violent sickness, fainting, and spasms. Nothing is more common than to hear these

these patients declare, they thought they should have died from taking them.

Such are the characters, and such the peculiarities of this particular complexion. Other indications of a weak Stomach, are,

1. An inability to continue long without food.
2. Frequent nervous, or what is sometimes called sick, head-achs.
3. A sense of languor and lassitude suddenly coming on the lower limbs.
4. Oppression and heaviness after dinner.
5. Hypochondriacism.
6. Flatulence.
7. A frequent desire to make water, especially on any slight agitation of mind, and the evacuation of pellucid urine without smell.
8. In women, large full breasts, or rather breasts surrounded with a very large proportion of fat, denote the same thing.
9. The use of spirituous liquors, even in small quantities, proving highly prejudicial.

To these, others less important might be added; these, however, are the principal, and on some of these it may be well to expatiate.

#### *Of the Inability to continue long without food.*

When a man awakes in the morning, he rises with renovated strength and energy, or to speak in

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the language of Darwin, with an accumulation of sensorial power; and the exertion he is capable of making, as well as the period during which he can, without inconvenience, abstain from food, constitutes in some degree the measurement of his strength.

Persons of a delicate constitution, generally feel much inclined to eat about the middle of the day, and it is proper in such cases that this should be attended to. Many can dine at one o'clock, or about that hour, who would be very much disordered by deferring it till five or six. Others cannot fast so long, without feeling an internal sinking, almost amounting to fainting, I have observed, likewise, what it is perhaps not very easy to explain, that young women who have answered to this description; and appeared incapable of going without food more than four hours at a time, have experienced a most beneficial change after having children, which has appeared to render the constitution stronger and more robust.

The middle of the day, then, is the best for such patients, and is particularly well calculated for those who lead literary lives: this has been approved of by some very sensible people, who have derived the lesson from personal experience. The celebrated Gilbert Wakefield strongly recommends

commends students to adopt this plan, and reprobates the notion of dining late for the purpose of gaining a long morning. The same advice has been given by Dr. Priestley, and if I mistake not by Archdeacon Paley. Few, excepting persons of very ardent minds, and very vigorous capacities, can profitably employ the whole of a long morning in intellectual pursuits; what best suits the majority, should be regarded as the standard for imitation. That

*Nervous head-achs, sudden depression of strength, a fullness and heaviness after meals, and hypochondriacism,* do likewise depend on a weak state of the Stomach, is a fact that will not be controverted by those who attend to these phænomena.

Irregularities in diet, however slight, will generally bring them on; even a basin of soup with many persons produces an oppressive feeling; and the more substantial kinds of food, beef in particular, render a person hypochondriacal for two or three days. The *nervous head-ach*, as it is with propriety denominated, is a very remarkable complaint; in some persons it occurs with great regularity at certain periods, frequently every month or three weeks.

It begins generally in the morning, and is diversified in its characters according to the peculiarities

culiarities of the constitution, but commonly makes its attack in the following manner.

The patient feels cold and chilly, with a slight nausea and sickness, sometimes a sense of emptiness in the Stomach, unaccompanied by nausea. The pain in the head is at first slight and scarcely perceptible, but gradually increases, and attains its acmé about two or three o'clock in the afternoon, accompanied with a throbbing in the temples, which the least motion aggravates, and which a sudden turn of the head would render almost insupportable.

This pain is frequently confined to one eye, or one side of the head; and the patient feels it difficult to raise the eye-lid, so as to express the natural vivacity of the countenance. The face becomes cold and contracted, and the coldness of the extremities concurs with this in testifying, that the circulation is languid, and the vital energies depressed; yet notwithstanding these general appearances of debility, it would seem as if the powers of the sensorium were increased; for it is worthy of remark, that the operations of the mind go on with more than common activity, though the patient is at the same time incapacitated from carrying his purposes into effect: even those who are subject to habitual despondency, feel for the time raised above the ordinary tem-

per

per of their frame. This complaint is sometimes hereditary, but more generally brought on by the patient's misconduct.

In women, two causes in particular may be mentioned as inducing it, suckling too long, and profuse discharges of fluor albus. On each of these causes it will be proper to make some observations.

Females, especially in the middling and inferior classes of society, are often induced to suckle their children as long as they can, to prevent their being pregnant, a precaution, by the bye, that does not always answer the design, and is attended with an inconvenience which very few seem to apprehend; they imagine that, though they may be a little debilitated by sucking so long, when they have weaned the child, their strength may be restored.

But this is an error that ought to be corrected; for when the practice of sucking is continued much beyond the powers of the system, it brings on a train of incurable evils.

What that change is, which is thus produced, it is exceeding difficult to define; suffice it to say, it is such as no future amendment of the health will remove. Spasms of the Stomach, flatulencies, epilepsies, and particularly the sick nervous head-ach, are thus engendered in the habit.

To obviate these pernicious consequences, care should be taken not to *draw upon* the constitution beyond what its resources can supply. Perhaps it may be asked, how can this be ascertained? what is the period during which a person can safely venture to suckle her child? and what are the criteria by which we are to judge? these are most pertinent questions, and demand definitive answers.

Few require to be told that much depends upon the constitution of the mother, that some are so weak as scarcely to be able to suckle at all, whilst others are capable of continuing it (especially in the country) even for years. This is well known, but it seems not to be so well understood that much, and perhaps as much depends on the strength of the child itself; this I can confidently affirm, that one child shall exhaust a woman's strength as much in six months, as another in twelve; and a little observation will establish the truth of the assertion, for every day affords us opportunities of observing, that when a strong child thrives fast, the nurse, if delicate, becomes emaciated.

This, then, precludes the possibility of establishing any regulation with respect to time, neither is the quantity of milk any rule of conduct; for when the child sucks powerfully, the fluids

are

are drawn in a preternatural degree to the breasts; whatever is drank flows to them immediately, and an abundance of milk may be thus supplied by a very impoverished constitution.

Indeed, the superabundant flow of milk into the breasts, is itself an indication of debility; for as it is obvious that with regard to this secretion, the body has not the power of retention, so neither has it a sufficient controul over the others. Profuse perspirations, and other discharges, very frequently attend, and the strength of the system is thus liquitated away. Boerhaave mentions a case of this kind, which he calls diabetes lactis.

This circumstance respects the interests of the child, as well as the nurse; for it is a fact, of which people ought to be apprised with regard to the choice of a nurse, that the abundance, or overflowing of the milk, is no real recommendation: the milk of such persons is frequently so degenerated, that a child shall pine from starvation, when he is supposed to have nourishment in plenty.

A woman's having a great secretion of fluid from the breasts, is therefore no proof that she may with safety and propriety continue to suckle longer.

If she feel a great and unusual sinking inwardly, sighs very often, looks pale and *hollow-eyed*, with a dark circle under the eye-lids; if she have giddiness and vertigo, with occasionally temporary loss of sight, a little short dry cough, a slight oppressive pain about the chest, then there can be no question, either that she has suckled too long, or is disqualified for discharging the duties of a nurse.

The other cause alluded to, *fluor albus*, is a still more frequent source of nervous head-ach. The debility which is brought on when this complaint is violent, either in duration or degree, would lead one to suppose, that the discharge is not a mere mucous secretion, but similar in its properties to the seminal fluid in men; this at least is certain, that it produces exactly the same effects on women, as intemperate venery on the male sex, and the same impression on the countenance, sallow eyes, with an appearance of languor, sunk cheeks, paleness, and especially a flabbiness and puffiness of the lower eye-lid, with a livid tinge, which is a characteristic physiognomy greatly to be depended on.

A pain in the small of the back, with a sense of lassitude and dejection, are the effects also of this discharge, varying according to its violence or continuance: these are always accompanied with

with weakness of the Stomach; indeed, as long as this part retains its power, the above mentioned symptoms are restrained: the discharge first acts on this organ, and the rest follow as its consequence.

Few diseases more strikingly demonstrate the effect of the nervous influence on the actions of the system than this; whatever harasses the mind, or depresses the spirits, never fails to aggravate the complaint; so does every thing that relaxes, warm beds, hot rooms, and especially hot liquors, tea in particular.

When the discharge is profuse, the parts in the vicinity are in a degree deprived of their power of action; hence pains about the hip-joints, extending along the thighs, and an inability to walk, almost amounting to palsy.

All these symptoms are relieved, or cured, by strengthening the tone of the Stomach, which is preferable to fomentations, hot-baths, or liniments; for these do not apply to the source of the disease.

Nervous head-achs in men, comparatively, but rarely occur; they are alike indications of a weak Stomach, and return periodically, go off spontaneously after continuing six or eight hours, and leave some weeks interval of perfect ease. These intervals of ease are the strongest marks

of distinction between this and heads-achs arising from other causes.

Blows on the head at an early period of life, as for instance, at the age of eight or nine, will often produce no sensible effects, as soon as the first impression has subsided; but when a boy who has been thus treated attains the age of puberty, then the consequences will be perceived, and obstinate continued unremitting head-achs take place. These head-achs are often not attended with much pain, and with no particular pulsation, but remain for months without one day's perfect intermission: they are primary affections of the brain, or its membranes, and are not to be confounded with nervous head-achs.

The pain in these instances seems to occur at the age of puberty, from the vessels of the head possessing more tension at that time, and thus offering greater assistance to the circulation of the blood. I knew a person in this situation, who from a weak infusion of quassia combined with aromatics, had most violent vomiting brought on, which is best explained, I conceive, by admitting this state of tension which it increased.

I am sensible that in enlarging on this kind of head-ach, I am deviating from the professed object of the present publication, but the importance

ance of the subject will, I hope, plead an excuse for the digression, especially as I am not aware that it has hitherto been explained.

There is scarcely a point in practice that requires nicer discrimination, than the different species of head-ach: they often assume appearances very similar to nervous affections, when they originate, not from debility, but plethora.

In the former instance, they very generally arise from the Stomach, and are to be relieved through the medium of that organ; in the latter, the deranged functions of the Stomach are attributable to the alteration in the head. The peculiarities of each condition it will be therefore proper to investigate.

The first mark of distinction is the general appearance of the patient: a person of great natural vivacity, who has always been subject to great irregularities of temper, being sometimes elevated by hope, and again speedily depressed by despondency, is the most likely to be the subject of nervous head-ach, if he have previously betrayed the symptoms of a feeble constitution, especially those already enumerated: this still farther strengthens the suspicion, the pain coming on instantly like a dart, and soon *entirely* ceasing, its being confined to one particular part of the head, or to one or both temples.

The approach of pain apparently in consequence of fasting, and likewise its temporary relief by what tends to invigorate the Stomach; these indicate a similar state of the system.

Another very distinguishing character, is a pain in the back part of the head, accompanied with chilliness and a sense of cold water running down the back.

In this case I have seen cupping very injudiciously, and very perniciously recommended; for it is an unequivocal mark of debility, is always rendered worse by bleeding, either general and local, and is often converted by such practice into some more formidable complaint, as convulsions, epilepsy, palsy, or insanity.

I do not mean to say, that the pain being in the posterior part of the head proves the nature of the complaint, but the sense of coldness which accompanies it, this gives it character: this pain, in five cases out of six,\* proceeds either

\* I have said five cases out of six, not in a vague manner, but as bearing some approximation to the truth; for in all medical histories, I conceive general and indefinite terms should as much as possible be avoided.

Whoever is conversant either with medical practice, or medical publications, must have frequently been embarrassed by such information as the following: "How long have you been ill?" "Some time." "How are your bowels?"

"Very

either from profuse fluor albus in women, or from excessive venery in men; a fact which should convince us, that what still farther reduces the strength of the system, is not most favourable to the cure.

In all investigations of disease, the cause of the malady should be the first subject of enquiry, and I cannot illustrate the truth of the proposition more forcibly, than by an illusion to the case just described. When a young man of a lascivious temperament devotes himself without moderation or restraint to the pleasures of sexual intercourse, his nervous system is enfeebled, his hand trembles, his spirits are dejected, his activity destroyed, and frequently his intellects become deranged.

This is unfortunately no imaginary picture, but such as real life too frequently pourtrays. Where these symptoms have been thus entailed, the most irretrievable mischief arises from improper means; of this I have seen three striking instances, the particulars of which are strongly imprinted on my recollection.

"Very bad" (implying sometimes great costiveness, sometimes diarrhoea). "What have you eaten during the last fortnight?" "Nothing," meaning perhaps bread and butter, tea, water-gruel, and a few other farinaceous articles; from which it is impossible to draw any conclusion, or at least any that ought to form the basis of inductive reasoning.

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The first was a young man remarkable for the propriety and soberness of his demeanour, though allied, it was said, to a family inclined to mental derangement: he married at the age of five and twenty a woman of a very lively character, and for a few months nothing occurred to interrupt their felicity, at least nothing *perceptible* occurred it might be better said, for no one can judge of the internal feelings of another.

At the expiration of this period his calamities began, he became unusually irritable, petulant, and fretful, and in a few days violently delirious and insane. These symptoms of excitement mislead the practitioner; instead of soothing, tranquil measures, which ought to have been adopted; instead of allowing him porter and solid food, for which he felt, or professed to feel, a most urgent propensity, he was confined to the most abstemious regimen, blistered repeatedly with unrelenting severity, and reduced by copious and reiterated bleedings to the most pitiable imbecility, and yet, for all these decisive measures, there appeared but one assignable reason, the *opinion* of the practitioner that this treatment was the best.

There was no amelioration of the disease, no diminution of the frenzy, no appearances of improving

proving health, or of returning reason; and from that period, to the present, he has continued a complete maniac.

The only remedies that ought to have been employed here, calculated to lower instead of excite, should have been blisters to the head, and moderate purging; bleeding was destructive, and abstemiousness a fault.

If the patient felt hunger, that should have been appeased by nourishing food, and moderate draughts of porter conformably to his usual habits allowed.

I attended a very short time since a patient who appeared to me to bear an exact resemblance to the case just now described. This man had a voracious appetite, and was bountifully supplied, without my being consulted, with whatever his appetite pointed out: he recovered in a few days; here the instinct was indulged, and the event justified the proceeding.

The second case to which I alluded occurred in Scotland. I was alarmed in the middle of the night by the shrieks of a female crying out, "For God's sake, somebody come and help me, my husband is dying!" I immediately hastened to her assistance, and found a man apparently about thirty years of age violently convulsed, with

with a turgid livid countenance, his hands violently clasped together, and his body contorted, The urgency and violence of the symptoms allowed no time for deliberation or enquiry, and being, as I judged from his age, very capable of bearing evacuations, I recommended a medical student, who ran to his assistance to take away eight ounces of blood from the arm : this gave no immediate relief, but in half an hour, or rather more, he became sensible.

As I was only an accidental visitor, I did not wish to take upon me the further management of the case, and advised them to send for the gentleman whom they were generally accustomed to employ, and requested permission to meet him. I had now an opportunity of ascertaining the nature of this man's situation, and of discovering the cause of the paroxysm.

He had been married for some years to a very handsome young woman, whom I afterwards found he passionately admired, and guarded with jealous circumspection. The day previous to that on which the fit came on, he took a dose of physic, which operated most powerfully on the bowels, producing, as his wife supposed, more than forty stools. It was not probable, therefore, that immediately after this he would be

be liable to the effects of plethora; and it is not at all improbable, that other causes may have concurred to increase his débility.

On the arrival of the gentleman who was sent for, all the convulsive symptoms had subsided; the pulse was full and quick, and a slight degree of giddiness remained: from these appearances he thought it adviseable to recommend further bleeding, and would not attend to the debilitating causes which seemed to have induced the paroxysm, he left it to his pupil to perform the operation, and departed: Bleeding was performed, but before eight ounces were taken away, another paroxysm similar to the first came on.

I prevailed on the assistant to tie up the arm, and proposed a draught of thirty drops of tinct. opii., with the camphorated mixture: this he took, and felt considerable relief, and gradually recovered by continuing to administer similar cordial medicines, and nourishing diet.

Here was a well marked case of epilepsy brought on by the evacuation of purging in a habit previously debilitated, and may fairly be considered a nervous affection.

The first case bore a strong resemblance to the first. A young man of a warm temperament formed an attachment to a female with whom he cohabited,

cohabited, and gratified his fondest wishes without reserve. A friend who was engaged in the same line of business with himself told me, that he could very certainly guess from his manner where he had been the preceding night, as his hands trembled, his countenance looked haggard, and all his actions were characterised with indolence. This person became insane, was treated as one labouring under violent excitement, by bleeding and purging, and has for some time been in a state of apparently incurable insanity.

These instances will be sufficient to point out the necessity of attending to preceding causes, for these oftentimes, rather than the existing symptoms, will shew us on what plan we ought to proceed.

These cases, and the commentaries I have annexed to them, seemed to arise unintentionally from the consideration of nervous head-achs, which are always more or less connected with a weak state of the Stomach. Another indication of which is

*A sense of oppression, and heaviness after dinner.*

When a person feels oppressed after eating, one of these two causes may be assigned, either

his

his Stomach is weaker than it ought naturally to be, or he has taken food too strong for his powers of digestion. A person under such circumstances complains frequently that the food lies heavy at his Stomach; that this sensation does not arise from mechanical weight is certain, because the same person would be capable of containing a much greater weight of another substance more congenial to his appetite.

It must proceed, then, from a change produced by the quantity of the food itself on the nervous energy of the Stomach, and will be best explained by what has been already said on the nature of digestion. Children in health never complain of this oppression, and it is curious, as well as pleasing, to observe their vivacity immediately after eating a meal, it would seem as if it instantly communicated fresh energy to the system.

The celebrated Venetian, who is well known by the title of old Cornaro, and who wrote his Life on purpose to inculcate the virtue of temperance, declares the same thing respecting himself. He says, he always felt very lively, and supplied with fresh energies after a meal; was at all times cheerful and in good spirits, and lived for the last few years of his life on one or two eggs a day.

The

The life of this veteran may be read with much real advantage by those who have occasion either to recommend or adopt the regimen best adapted to old age. Whatever irregularities in diet occur between twenty and fifty, may in a good constitution be easily overcome; but in a more advanced period, especially after sixty, the observance of temperance is an imperious duty which cannot be infringed with impunity.

A practitioner should be very inquisitive in regard to the diet of patients of this description, as it will be found on examination that the diseases of elderly people depend more frequently on derangement of the Stomach, and the digestive organs, than any other cause whatsoever.

### OF FLATULENCE.

In enumerating the indications of a weak Stomach, I have mentioned flatulence as one; but as this symptom is frequently observed to occur in persons who are not habitually afflicted with weakness of the Stomach, it becomes necessary to mark the distinction.

It may at all times be regarded as a proof that the functions of the Stomach are disordered, but this disorder may arise in a constitution naturally

naturally strong, from a state of plenitude rather than debility, and is to be treated in such instances very differently from what it would be prudent to do, where debility is the constitutional character. This difference it is more easy to conceive than define, yet it is extremely important in its application to practice. I therefore deem it proper, and perfectly consonant to the object of this publication, to consider this symptom more minutely, and shall probably succeed best in conveying my ideas by the illustration of example.

### CASE.

#### *Of Flatulence cured by Bleeding.*

A young lady about eighteen years of age complained of being very much troubled with a pain and oppression at the stomach. The pain generally came on in an evening, and was speedily followed by such a sense of distension and fullness, that she was obliged to loosen her dress in order to give relief to her feelings. In a few hours the pain generally diminished, and the relief was always accompanied by an explosion of wind upwards.

To mitigate these symptoms, which continued several months, the following medicine was recommended.

R. Mistur. Camphorat. 3vij<sup>s</sup>.

Æther. Vitriol.

Tinct. Aromat. aa 3ij.

M. ft. capt<sup>t</sup> Coch. iiij. bis die.

The first dose of this, very materially aggravated the disease. The head was seized with violent giddiness, a most oppressive sense of suffocation was produced in the throat, and such hysterical symptoms came on, as gave considerable alarm to her friends.

This patient exhibited the following distinguishing appearances: a full, rather florid and healthy-looking countenance; with a skin somewhat inclined to a dusky brown; not the fair thin skin so prone to and so expressive of a consumptive tendency, that betrays the slightest emotions of the mind by its changes and discolouration. Her arms were firm and fleshy, of a deep florid red colour, the eyes dark, and expressive of great vigour and vivacity. These appearances certainly were not indications of debility; and when I add that she had as yet never menstruated, I mention the cause to which all her symptoms were attributable. That function was now become necessary to the general health of the system, and the Stomach was disordered in consequence, though it could not, from her former

former habits, be reasonably inferred that it was naturally weak.

From the general complexion of the patient, her age, her strength, and her peculiar situation, bleeding was recommended, which gave great and immediate relief, and the use of aloetic medicines, with relaxants occasionally, completed the cure.

This Case is not unfrequently met with ; but, excepting in these particular circumstances, few practitioners would think of employing the lancet to relieve flatulence at the Stomach, which in the cases where it generally occurs would be aggravated by the debility it is calculated to induce. The propriety of this remedy will be indicated by attending to the following circumstances.

First, Constitutional character, the general health, and the appearances of plethora.

Second, Occasional palpitation of the heart, especially if in a warm room.

Third, The age of the patient, puberty especially.

Fourth, The flatulence being relieved rather than increased by fasting ; this is, perhaps, the most decisive.

Fifth, The juvantia and laedentia, which often give more information than any thing else ; it

strengthening and tonic remedies do harm, the contra indications are obvious.

Sixth, In women menstruation never having occurred, or its being suppressed; and

Seventh, and lastly, The suppression of any habitual evacuation: These circumstances, taken collectively, will be sufficient to direct our practice.

The habitual evacuations which frequently produce this symptom by its suppression, are issues, setons; the matter exuded from the soles of the feet, which in some people is very considerable; the matter likewise from the general surface of the body by perspiration, being checked by leaving off customary cloathing, or staying too long in a damp situation; the most trivial diminution in the ordinary actions which have been established in the system for some time, will produce the same effect, any eruption being repelled, either from the face or any other part of the body.

Whenever flatulency proceeds from these causes, the re-establishment of the particular secretion, however trivial it may appear, is the first object to be accomplished; as it is a critical discharge with respect to the system, however insignificant it may seem in appearance.

I do not mean to assert that bleeding is either necessary or proper in all these cases, that must be determined by the age and strength of the patient: I am chiefly intent at present in establishing the distinction between flatulence, as it is the effect of a Stomach naturally weak, and as it proceeds from the accidental operation of certain causes on Stomachs naturally strong; in the former case, we are to adopt every plan that can strengthen and corroborate; in the latter, though bleeding may not be admissible, we ought generally to employ gentle evacuations, either by vomits or purgatives, before we venture to adopt the tonic or astringent plan.

A person who has for some time had an issue suffers it to heal, and is seized with sickness and flatulence at the Stomach, and giddiness and vertigo in the head; if we recommend bark and bitters, we frequently find the patient worse, and render him liable to an attack of apoplexy, from which he would have been secured by the previous exhibition of a brisk-cathartic.

Very different from this is the situation of a person afflicted with flatulence from debility alone. Such patients are at all times nervous and hysterical, are incapable of continuing long without food, and would be reduced almost to syncope by the operation of purging medicines.

A most striking instance of this I had an opportunity of witnessing lately in a man about thirty-five years of age.

This person was so troubled with wind at the Stomach, that for several hours he would incessantly continue belching, and the explosion of air was accompanied with so much noise that he was ashamed to walk along the streets: his haggard looks, and sunk eyes, too strongly betrayed the weakness of his constitution, and he was incapable of continuing any exertion after four o'clock in the afternoon. All these effects were produced, as he had the candour to acknowledge, from intemperate indulgence in that pernicious practice so prevalent in large schools, among boys.

It is curious to remark, and may afford room for speculation with respect to the nature of digestion, that this man had a remarkably good appetite, and was particularly partial to beef *under-done*, which sat easier on his stomach than any other apparently lighter food, and would for a time stop these flatulent eructations. “Flatulence,” Dr. Beddoes says, “may be considered the measure of indigestion.” How is this assertion to be reconciled with the case just related?

In habits like this, it would seem as if the principal

principal fault consisted in the body not having the power of retaining its energies a sufficient length of time, but parting with its vitality so rapidly as soon again to require an additional supply; hence purgatives are very prejudicial, and great caution is requisite in these cases, to administer only such mild aperients as shall remove the indigestible matter from the bowels, and not carry out the nutritious fluids of the body.

Early and intemperate venery in men, and excessive fluor albus in women, which have already been represented as producing similar effects, are a very common cause of this symptom, but by no means the only one. It occurs not unfrequently in women who are very much confined at their needle, arises likewise from damp situations, is very often produced by frights, and sometimes by fevers, which act probably by weakening the sensorial power, and thus preventing the due supply of nervous energy to the Stomach.

The following Case I copy verbatim from my note-book. It shews several striking peculiarities, and in some respect confirms the fact, that certain persons have had the power of returning their food like ruminating animals.\*

\* Dr. Arbuthnot, in his treatise on Aliments, says, there have been several instances of ruminating men; and that quality

*Case of Flatulence, with the Regurgitation of Food,  
and the Method of Cure.*

Eliz. Wilbraham, æ. 45, married, and has had children; when 12 years old caught a fever, which continued three months, and affected her brain very much; since that time (but certainly not before) she has had a very weak Stomach; what is remarkable, she cannot digest beef; whenever she has eaten it, it always produced great uneasiness and a sense of weight and pain at the Stomach, which continued about half an hour, and then was rejected bit by bit by belching with wind (not with retching and vomiting) till the whole seemed to be returned.

This is not the case with any other meat, and though the fat of any meat is very obnoxious to the Stomach, it does not come up like beef.

All vegetables agree with her except potatoes: every kind of meat eaten hot produces a great sense of distension, but cold meat does not.

Tea seems to agree tolerably well; she never finds any acid or heart-burn, but has often a sense of fluttering like a bird at the Stomach.

Walking quick always brings on violent flatu-

leaving them was a symptom of approaching sickness. Vid. Arbuthnot on Aliments, p. 222. For illustrations of this fact, vid. Philos. Trans. & Bonetus's Sepulchret.

lent

lent eructations, which continue an hour or more without intermission; she once tried, by the advice of a friend, to suppress it, but severely repented the experiment, as she thought it would have killed her; her menses have always been regular, but her symptoms are generally worse a day or two before they make their appearance; the bowels are regular.

Though this patient is convinced that the fever impaired the functions of the Stomach, the violent flatulence has continued only five years, and for this she knows no other cause than continual sitting at the needle. It first began with pain in the Stomach, which seized her in one moment, and darted through the left side; this at first only three or four times a week, attended with the globus hystericus in the throat to such a degree, that she could neither speak nor swallow.

These symptoms always came on between twelve and one at night, and have continued, with only a few days intermission, during the period already mentioned. I should have observed, in detailing the peculiarities of this case, that the stools have always been of a natural colour.

No medicines, however palatable, will remain on the Stomach unless given in the form of pills.

As this case conveys many striking peculiarities, I think it will not be unacceptable to the reader to describe the plan of treatment which was adopted, and the most instructive method of doing so, is by detailing exactly the formulæ in the order they were prescribed, with the report of the patient relative to their operation.

I shall just premise, that from the opinion I had previously entertained, and which I have since had repeated opportunities of verifying, viz. that in a variety of instances, flatulence is attributable to plethora rather than debility, and to a plenitude of the vascular system, or at least of those vessels in contiguity with the Stomach. I began Nov. 24th with recommending V.S. ʒvj. Magnes. Vitriolat. ʒ<sup>l</sup>. o. m.

When a physician is called upon to prescribe in a case where the symptoms are obscure, and especially if it is at all questionable whether he ought to employ tonics and stimulants, or remedies directly repugnant to their operation, he should be careful not to blend them, but to adopt a plan at once simple and decisive, and vigilantly attend to the effect which ensues.

25th. I found this patient better, and the pain in the side relieved by bleeding. All the salts staid on the Stomach.

R Mist. Camphorat. ʒ x. Spt. Aether.

Nitros. ʒ i. M. V. ft. Haust. bis die sumend.

Pulv. Rhæi, Jalap. aa gr. x. P. Arom. gr. iiij.

M. o. man. sum.

27th. These medicines were all rejected, almost immediately; the globus hystericus, which used to come on every night, has not returned since the bleeding.

Linctus p. r. n.

Magnes. Vitriol. ʒ ij. in Inf. Ros. bis die.

29th. No material alteration, therefore in hopes of expediting the cure, and from the high recommendations of some sensible friends in favour of Nitrate of silver, ordered

Argent. Nitrat. gr. j. Tinct. Opii g<sup>x</sup> xx.

Aq. Meuth. ʒ ij. M. coch j. amp. bis die sumend.

Dec. 4. This did not remain many minutes on the Stomach, and from the smallness of the dose, it is obvious that the quality, and not the bulk of the ingredients, occasioned them to disagree.

R Opii gr. ij. divide in Pilul. vi. capt. j. ter die.

6th. These pills remained on the Stomach, and the patient says she is better.

Rep<sup>t</sup> Opium.

11th. Rep<sup>t</sup> Opium. Emp. Canth. regioni Ventriculi.

The

The pills continue to agree, but the flatulence and regurgitation of meat continue.

It is a fact, which I have more than once observed relative to the use of opium, that it does not seem to disagree even in those cases where bleeding is indicated. Indeed, it very often happens, that in these cases it does not produce such an effect as it would do at another time on the constitution. I have known a hundred drops of the tincture administered for the relief of a violent pain at the Stomach, supposed to proceed from gout, without any sensible effect, which was removed by bleeding in a few hours.

Dec. 18. Opii gr. j. o. n.

Pulv. Nitr. g. x. bis die.

The thirst, which was constant, is now relieved.

27. Emp. Picis Burgund. regioni Ventriculi.

Tinct. Digital. g<sup>t</sup>t v. in Aq. ʒ<sup>fl</sup>. bis die.

Jan. 1. The Tinct. Digital. staid on the Stomach, and she says, "afforded her much ease, and did her a great deal of good." This effect of the Digitalis, together with the benefit obtained by bleeding, gave great information relative to the nature of the disease. It is an observation I may probably be induced to repeat when treating on pain of the Stomach, that whenever affections of that organ proceed either

from

from inflammation or plethora, antimony combined with digitalis very often improves the appetite, and excites hunger instead of nausea. This remark will be found correct.

Jan. 8. Rep<sup>r</sup> Digital. bis die.

The bowels being costive, ordered

Pulv. Rhæi G. Arab. a 3j. o. n.

12. The powder rejected.

Pulv. Rhæi gr. x. Pulv. Aromat. gr. iiiij.

M. bis die sumend.

This not only agreed with the Stomach, but produced a material alteration in the habit; there being no wind scarcely brought up from the Stomach, but a good deal discharged per anum, and great uneasiness in the bowels till it is thus expelled. Her head is likewise much better. She continued the use of these powders every day to the 31st, and was then dismissed cured. I have seen this patient March 28, 1810, and find she continues perfectly free from her former symptoms.

This case is certainly interesting, and shews how very difficult it is to lay down any general rules with respect to diet.

It may be very naturally asked, from what flatulence proceeds, or how is it generated? The vulgar

vulgar have an idea, that if a person goes out rather thinly clad, the air penetrates the body as it would any porous substance; but this is too fanciful to deserve investigation.

An opinion more plausible than this is, that it proceeds from the food itself, which undergoing a kind of fermentation, extricates the air which formed a part of its composition, during the process of digestion.

This may probably be the fact on certain occasions, but cannot be received as a general principle, or as a principle to which we can always refer for an explanation of the phænomenon.

I believe in most cases, flatulence proceeds not from the extrication of air from any substance taken into the Stomach, but is secreted from the Stomach itself. In the case above described, any agitation of the body would bring on flatulent belchings to a great degree, so would a glass of wine, when no food had been taken for some time; and as the quantity thus evolved could not possibly be contained in its aeriform state in the Stomach, so neither is it probable that it arose from the food which had probably been digested before, and which would be assisted rather than retarded by the exhibition of this cordial.

This

This subject appears to me to be very little understood, and to merit further inquiry.

Is it possible that this may in some degree depend upon the lungs? There is undoubtedly a very great, though at present a very unintelligible connection between respiration and digestion: and I have certainly observed, that those who are most subject to flatulent complaints are very prone to consumption. I have observed likewise, that if children are troubled with flatulence before they are thirteen or fourteen years of age, it denotes a strong tendency to that disease. In a few of those cases which I can summon to my recollection, where the smell was similar to hydrogen gas, the patients have all died of that disease.

There is a particular species of consumption called the Miller's Asthma, arising from the small particles of flour inhaled into the lungs, in which flatulence towards the close of that fatal complaint proves a most distressing symptom; a circumstance which gives at least some colour of probability to the opinion I have suggested.

Such patients, as they approach the period of their dissolution, have generally a very greedy appetite, and can eat large quantities of animal food, without feeling any oppression or sensible inconvenience.

This

This flattering appearance of amendment is too generally regarded by the friends of the patient as a favourable symptom, but the result proves the fallacy of their expectations; for the emaciation and debility still continue to increase. This was long ago observed by Bennet, in his treatise on Consumptions, who says, "When phthisical patients are greedy of food and receive no strength from it, they are to be given over, for it indicates that the *vital nectar* is turned into a corroding fluid.\*

What has been now stated relative to flatulence, refers to patients of every description; but there is a certain period of life at which females are particularly subject to this complaint, and which deserves our attention.

### *Of Flatulence originating from a Cessation of the Menses.*

When that particular secretion which is peculiar to the female sex is about to disappear, various changes take place in the constitution, diversified in different habits by the peculiarities of temperament and situation, yet always productive of some temporary inconvenience, and especially disorders of the Stomach and bowels.

\* Vid. Bennet on Consumption, p. 161.

What

What that matter is, which menstruation conveys out of the system, it is not incumbent on me now to inquire; some have asserted that it is a fluid by no means injurious in its qualities, and only hurtful when retained, from the plethora it occasions.

This opinion I cannot neglect the opportunity of opposing, as I am thoroughly convinced that it is a secretion *sui generis*, and that it relieves the constitution from a matter very prejudicial to its health: of this assertion the following case will afford some corroboration.

### CASE.

M. D. a woman 27 æ. came under my care at the Dispensary. She complained of great weakness, languor, and debility, breathed with apparent difficulty, and felt her respiration much quickened by every effort to move, especially up an acclivity.

Her countenance was pale, her limbs cold, the pulse scarcely perceptible, and the venous circulation so languid, that when the finger was pressed either on the legs, or arms, which were of a deep purple hue, a minute or two elapsed, before the effect of the impression disappeared.

This was entirely owing to the suppression of the menses six months before, by remaining too

long in a damp kitchen. Now where was the plethora, where was the plenitude of the vessels? Would bleeding, or any other remedy by which plenitude could be relieved, have afforded any reasonable prospect of a cure? Instead of this, acids and bitters, with ferruginous medicines and occasional aloetic purgatives, by reproducing that discharge, proved successful. As there can be no doubt, in my opinion, that the retention of the matter of menstruation is in some degree poisonous to the system, flatulence originating in that cause is most likely to be cured by removing or correcting the evil. The influence of this matter on the constitution varies according to the part to which it happens to be directed: thus patients of this description sometimes instantaneously complain of a burning heat in the face or hands, sometimes of giddiness; frequently inflammations suddenly appear on the extremities; and when the Stomach and alimentary canal are attacked, flatulency and indigestion ensue.

The suddenness of this effect is not more remarkable, than the violence. Women being frequently so enlarged in a few hours, as to resemble a person in the advanced stage of a dropsy. An interesting example of this came under my care some time since, of which the following are the particulars.

CASE.

## CASE

Mrs. E. F. aged 46, complained of great pain and uneasiness in the abdomen, with much shortness of breath, and great enlargement of the body. Her countenance, though rather thin, had no appearance of anasarca, or of diseased emaciation; the pulse was 120, strong, and full; the urine natural, and the appetite not much impaired. Her menses had for the last twelve months been irregular in their appearance, and had not returned in any degree for three months. She had long complained of much wind in the Stomach, especially in the evening, when she was obliged to slacken her cloaths.

One night, after eating some vegetables, she felt great uneasiness at the Stomach and abdomen, which very soon enlarged to an astonishing size. The following remedies, with their effects, will best describe the subsequent progress of her complaints. I should first premise, that she had been costive some days previous to this swelling.

R Magnes. Vitriol.  $\frac{3}{4}$ lb solve in Aq.  
Distill.  $\frac{3}{4}$ v. add Tinct. Aromat.  $\frac{3}{4}$ lb M.  
cap' Coch. iij. amp. bis die vel s<sup>a</sup>epius  
donec Alvus bis vel ter die responderit.

R Liniment. Ammon. fort  $\frac{3}{4}$ vi.  
Tinct. Theb.  $\frac{3}{4}$ j. M. ft. Linim.  
quocum opt<sup>m</sup>e perficit Abd<sup>m</sup>.  
calida manu bis die.

The mixture operated several times in the day, but the stools were unaccompanied by any discharge of flatus, and the enlargement in bulk continued undiminished.

The pain which probably originated, at least in a great degree, from the violent and unusual distension of the abdominal muscles, seemed to have received some alleviation from the liniment, but there was no other visible amendment.

I believe it was two days from the commencement of these means (for I have in my notes neglected this point) that finding the pulse still continue equally firm and frequent, and presuming inflammation or tension might exist, I recommended

Venesection ʒvij. Fortus Pavav. Abdomini  
and the following Enema,

R Inf. Sennæ ʒvij. Tinct. Jalap ʒ<sub>b</sub>  
M. ft. Enema propriæ caloris injiciend.

These means gave no relief, and what is curious, the blood did not exhibit the least inflammatory crust, or was the strength and celerity of the arteries lessened.

Finding no advantage was obtained by this antiphlogistic plan, and reflecting on the sudden appearance of the swelling, as well as the flatulent symptoms preceding, feeling likewise

on

on examination that it was quite tense and tympanic, the method of treatment was varied.

But here I beg leave to remark, en passant, that it is not at all times so easy, as might be supposed, to distinguish between dropsy and tympanitis, where the abdominal muscles are thin, and little adipose substance in the integuments, it is not difficult; but in corpulent persons there is much room for deception, and therefore we should connect the history with the examination of the case to obtain perfect satisfaction.

This patient now used the following:

R Mist. Camphor. ʒv. Æther. Vitriol.

Tinct. Lavend. aa ʒS. M. ft. capt.

Coch. iij. ampl. bis die.

R Aloe Socotor. gr. ij. Gambog. gr. j.

Ol. Nuc. Mosch. g"j. Sapon. gr. x. M. et  
divide in Pilul. iij. om. noct. sum.

The mixture did not quicken the pulse, though it imparted a sense of warmth and heat to the Stomach. The pills operated two or three times a day, yet no sensible relief was obtained—ordered as follows:

R Pulv. Rhei, Aromat. aa gr. v.

M. bis die sumend.

Pulv. Ipec. Comp. gr. x. o. n.  
hora decubit. sumend.

Not much better, pain still continues unremittingly, nights restless, strength diminishes.

R. Ol. Ricini. Tinct. Sennæ aa  $\frac{3}{j}$ ,  
Vitell. Ovi pauxill. Aq. Meuth.  $\frac{3}{j}$ .  
M. ft. haust. bis die sumend.

Sickness and nausea, two stools, a little wind per anum.

R. Pulv. Myrrh  $\frac{3}{j}$ . Ferr. Vitriol gr. iv.  
Kali  $\frac{3}{j}$ . Tinct. Aromat.  $\frac{3}{B}$ . Aq. Meuth.  $\frac{3}{vB}$   
M. capt. Coch. iij. bis die.

This in two days gave some relief, the belly was less tense, and the tumour subsided, though without any expulsion of wind: used in addition to the above, ginger tea, by way of clyster, she continued to mend rapidly. The patient not having come again, I cannot detail further the progress of the cure.

This abrupt termination is a circumstance which a practitioner has often occasion to lament; and tends in no small degree to damp the ardour of his enquiries. After watching with zealous assiduity the progress of a peculiar case, to be deprived of the opportunity of witnessing the complete effect of his labours by the changeable caprice of his patient, is not, to say the least of it, such a return as he merits, who makes his patient's welfare the object of his most serious solicitude.

solicitude. The preceding case, as far as it has been detailed, affords however an opportunity of making some

### REMARKS.

In the first place it may be asked, what was the seat of the disease? No one, I presume, will deny the existence of flatus, but was it in the Stomach, or the Colon, or was it in the Cæcum?

Boerhaave does not scruple to assert, that the Cæcum is the seat of flatulent affection in hypochondriacal persons; yet in this instance, previous to the sudden enlargement, the flatus which was emitted, came from the Stomach by belching. The myrrh and iron unquestionably afforded most relief, and iron in some form is probably that on which we have most reason to depend.

Dr. Graves of Sherborne, in Dorsetshire, has given a very instructive case similar to the preceding one, in the first vol. of Dr. Simmond's Medical Facts and Observations: he calls it a Meteorismus Ventriculi, a term previously employed by Sauvages. In this instance the patient was a female, of 15 æ. She had much thirst, but her appetite was not impaired.

After trying various medicines to very little effect, he administered 18 grains of prepared

steel twice a day, and a day or two afterwards  
Pulv. Rhei 9j. Cal. gr. iij. Simul commist.

This operated briskly without removing the tumor, but in three days afterwards, by continuing the use of the chalybeate, the swelling became softer, and in two days more was entirely removed. How this disease would terminate if left to itself, or if not subdued by medicine, I cannot from experience say.

Authors state, that the confined matter when the two orifices are closely contracted, has been known to burst the Stomach, and that the patient dies in convulsions.

#### OF THE MODE OF TREATMENT BEST CALCULATED TO STRENGTHEN THE STOMACH.

"To seek for specifics," says a celebrated author (Dr. Marryat) "is inexcusable puerility, or the suggestion of desponding indolence."

This observation may be properly applied to the subject in question; for though a variety of remedies are justly recommended as stomachics, general treatment must be attended to, in order to give efficacy to their virtues.

As the cure of a disease is the great object of practice, this part of the subject may be considered the most interesting, and it appears to me  
the

the most difficult to describe, for nothing can be advanced but with relation to particular circumstances, on which the judgment and discrimination of the practitioner must after all be called upon to decide.

This is obviously a difficulty inseparable from the subject, and will therefore, I trust, plead an excuse for itself. The remedies for a weak Stomach are not to be found in bark or bitters solely, though they may contribute a share: they must be aided in their operation by an attention to diet, drink, exercise, cloathing, &c. points of most essential consideration for the ~~weak~~ letudinarian of this description.

### OF DIET.

HIPPOCRATES, whose great judgment and observation will be admired exactly in proportion as his writings are understood, made a remark relative to this subject, which cannot be too strongly inculcated. He says, "Diet must be proportioned to the labour;" and when we consider what a great difference there is in the exercise and occupations of different persons, one would feel surprised that this maxim should be so little attended to.

One person may walk on an average twenty miles a day, another not half a mile in the same period, yet both dine on the same kind of food; and perhaps eat an equal quantity: in the one case, the expenditure of the body is merely restored; in the other, for want of exercise, a degree of plethora is induced, which from a repetition of the same habits, terminates at last in some formidable disease, such as gout, palsy, or apoplexy. What comparison can be made between the habits of a coal-heaver on the river Thames, and those of a man doomed to the destructive drudgery of an attorney's desk?\* The food that would be light and nutritive to the one, would be indigestible, and oppressive to the other.

This is, however, to be understood *cæteris paribus*, for there is a radical difference in the digestive organs from the first moment of conception: and it should be the great object of a practitioner to find out the constitutional difference. This can only be acquired by careful observation, and hence the necessity of early and vigilant attention to disease.

This essential qualification appears to be very little attended to in the professional education of young men, who often sedulously apply to chy-

\* Vid. Cobbett's Life, written by himself.

mistry,

inistry, or botany, and the collateral branches of the science, but skim over that, which is the very ultimatum of their pursuits, the knowledge of disease itself.

He who has habituated himself to the contemplation of countenance and character, not with the eye of Lavater, but of Hippocrates, may often predict with certainty the diseases to which a person is disposed; but it can only be by contemplation and reflection, not by a glance, or by examining a metallic oxyd.

Though this is digressing from the subject, I hope the digression is excusable; as it is possible this publication may fall into the hands of junior practitioners, they should be seriously apprized of the importance of their undertaking, and feel it a duty to qualify themselves by a faithful and persevering attention at the bed-side, where alone the lesson of practical experience can be acquired.

There are many persons so privileged by nature as to possess a Stomach capable of digesting the most substantial food, without the aid of regular exercise; to these, therefore, all medical precepts are superfluous; and it is only necessary to admonish the more delicate appetite, not to look on such persons as affording any rule of conduct for themselves.

We

We often hear people seriously deny the destructive influence of spirituous liquors, because they can produce a few rare instances of persons who have lived to an old age under their regular use; but a similar argument might be advanced to prove that the plague is innocent, because a few individuals have escaped the contagion.

Delicate Stomachs require frequent supplies; they should never drink spirits, either genuine or diluted, and particularly in the morning.

Patients of this description should rise every morning two hours before they breakfast, and walk out for an hour previous to that meal.

They should avoid as much as possible every thing which has a tendency to relax the system, as warm carpeted rooms, warm soft beds, drinking tea, &c. All acids should be avoided, and very little wine used. If one glass of wine after dinner produce a flush in the face, it is a sufficient indication of its bad effect; and, as has already been observed, if there is a sense of fullness and oppression after eating, the food has proved offensive either in quality or quantity.

No general rule can be laid down with respect to the particular kind of food which an invalid prefers; but it is most unexceptionably true, that animal food possesses a much greater proportion of the nutritious principle than vegetables. This

I believe to be an unquestionable axiom, and, if true, is alone sufficient to overturn the opinions so frequently advanced, that the saccharine matter, or the mucilaginous substance is the principle of nourishment, there being much more of these principles in vegetable than animal bodies.

This observation I should scarcely think it necessary to prove. Dr. Falconer, in his remarks on the influence of climate, food, &c. expresses the same opinion. "Animal diet," he says, "is greatly more nutritious than vegetable, both as containing a greater quantity of nourishment, and as this nourishment is more easily extracted."\*

Haller asserted the same thing long before, "Dudum est annotatum eas gentes robustissimas esse quæ carnibus et iis crudis vivunt ut tartaros, brazilianos, Esquivianticos, tum venatores quos diximus."†

People are very apt to be deceived in estimating the effect of diet by its power of generating fat.

This I consider a fundamental error in Count Rumford's œconomical soups.

\* Vid. Falconer's Works, p. 232.

† Vid. Haller. Phisiolog. Lib. xix. Sect. 3.

One ounce of solid and fresh animal food possesses more nourishment, and is capable of imparting more vigour to the system, than six ounces of his soup, however fattening.

Many substances are capable of being conveyed by the lacteal vessels into the blood without undergoing the process of digestion. Finely powdered madder, we know by experiment may ; the ova of some insects most probably are ; and fat substances in like manner produce an augmentation of bulk, by being thus infused as it were into the blood.

The most substantial foods generally used, where the Stomach is capable of digesting them, are pork and beef; on these a person can fast longer than on other kinds of meat. The athletæ of Greece were accustomed to live on the former for some time previous to their contests.

Pork is a meat, however, too gross to be used frequently by those who take little exercise, and should not be eaten by any who are subject to eruptions on the skin ; for though digestion converts a portion of our food to the nourishment of our frame, there is reason to believe that its nature is not entirely destroyed, as it has been observed that the flesh of birds that live on fishes only, retain the disagreeable fishy taste, and

and the flesh of blackbirds that feed on buck-thorn berries is purgative.

For delicate persons, the only general rule to be observed in the choice of animal food, is to select young meats; as an animal advances in life, its fibres become more compact, and its texture less easily destroyed. Though I have adduced a few instances of persons with whom beef agreed better than other food, this is not generally the case; on the contrary, there are several who cannot eat beef without feeling a giddiness of the head, combined with great languor and lassitude.

Hypochondriacal people find this frequently the case, especially if they eat it cold for two or three days successively. Though animal food is allowed to possess the most nourishment, it is obvious from the structure of the teeth, as well as of the stomach and bowels, that man is intended to partake of vegetable food likewise.

Dr. Beddoes, in his extravagant commendations of animal food, has in a great measure overlooked this fact; and one would almost be induced to conclude, from the tenor of his publications, that this was the great antidote to disease, especially consumptions.

Every prepossession of this kind, more or less impedes that free exercise of the reason, which

in every individual case should be our guide. It is vain to urge the patient to pursue a regimen at which the Stomach revolts, yet this we daily witness, as if the refusal to eat proceeded from obstinacy, and not from disease.

"Some physicians," says Boerhaave, "wondered why, when they ordered the most nourishing food in a desperate consumption, it should be attended with no benefit; but the reason is, that in this case the assimilating power is wanting, without which no nourishment can be obtained. Galen therefore deservedly blames the physicians who did not attend to this; and by giving flesh and wine in such cases, poured nourishment, as it were, into an empty vessel."\*

Animal food once a day is generally sufficient, a glass of wine, or half a pint of porter, may be used with this meal to warm and strengthen the Stomach, but on this principle alone, not as having themselves any nourishment at all. The necessity either of wine or porter is the effect of a weak habit, or of early indulgence, and should, if possible, be avoided.

In London, the common people are accustomed to consider porter an essential part of their support; but parents should be very care-

\* Vid. *De ratione victus in morbis acutis ex Hippocrates sententia*, cap. iv. chart. tom. xi. pag. 189.

ful not to let young children drink any thing but water, for all that is naturally required from drink is to dilute the food, not to stimulate the Stomach.

I remember once visiting a very delicate lady, who was suckling her first child, and to qualify her as effectually as possible for the undertaking, her nurse urged her to drink very liberally of porter, which she did much beyond her natural inclination, and kept herself almost in a state of perpetual intoxication. That persons of laborious occupations should find this drink necessary I will not dispute. I have been seriously assured by some of the coal-heavers, whom I have asked on purpose to ascertain the question, that they should be incapable of performing the work they do, without a liberal supply of this beverage. I believe this may be true, but what conclusion shall we draw from it? only, that men under such circumstances work beyond their strength (as it is termed) they work much beyond what in a state of nature they would be inclined or required to do, and the consequence is, they die of premature old age.

This however seems something like a fact in favour of the invigorating effect of porter, but it is not clear, even in these instances, that taste and inclination are not the principal inducements.

Dr. Franklin, in his life written by himself, informs us, that when he was employed as a journeyman printer in England, he only drank water, though all his fellow workmen drank porter and spirits; notwithstanding his abstemiousness, he felt himself more capable of enduring fatigue than they, and acquired the title of the American Aquatic.

Of spirituous liquors, it will be scarcely necessary to shew the malignity; they destroy the most vigorous, and are to the weak as fatal and destructive as the poison of a viper. In cold latitudes, they can be taken with more impunity than in southern climates. The inhabitants of Scotland bear them better than those who live in the metropolis.

In Edinburgh, I was assured by a person of sense and observation in the liquor trade, that when an English regiment is stationed there, the soldiers suffer abundantly more from the use of whiskey, than the natives.

The influence of spirituous liquors on the Americans, has quite altered the complexion of their character.

The Duke de la Rochefaucault observes in his Travels to America, that the Indians in the vicinity of towns are by no means so tall, or strong, as those who live more remote, owing to the use of

of rum. May not the character of the ancient Romans, their valour and perseverance, be attributed to their being unacquainted with the use of spirituous liquors? When they made war in hot countries, their common drink was vinegar mixed with water, which they called posca.\*

Were I called upon to state which is the most salutary, or rather the least pernicious, I should mention old rum; gin I think the worst, for besides its action as alkohol, it is combined with an essential oil which stimulates the kidneys, and acts as a diuretic.

There is an effect produced by the regular use of this liquor, which deserves to be mentioned. When it has been continued for some time, the kidneys cannot well perform their office without it. Of this I have known three instances, and in neither was it the effect of intemperance; one glass of gin and water every night after supper, in the cases to which I allude, was become so necessary to the system, that when it was left off, a total suppression of urine was the consequence.

I believe it has been suggested by Dr. Darwin, that the effect of these fluids is to rob the blood of its oxygen; but whether the suggestion ori-

\* Vid. Nonnius de re cibaria, lib. iv. cap. 15. p. 179.

ginated with him or not, it appears highly plausible, and very explanatory of its operation.

Alkohol, which is the basis of all spirituous liquors, chymically examined, is principally hydrogen, and this is well known to possess a powerful affinity for oxygen: this affinity it affects, whether in the human body or not; the more firm and strong the vital energies, the more will its influence be withheld, but it still operates to a degree.

It is well known to surgeons, that under certain stages of the venereal disease, when an ulcer exists, it sometimes assumes a malignant aspect, under the use of mercury, and appears phagædnic, corroding rapidly the adjacent parts, and bidding defiance to every remedy, local or internal. These I have almost always (I speak perhaps with more than prudent reserve by saying almost) found to arise in habits previously impaired by ardent spirits.

There is a peculiar ulceration of the womb, of which every day multiplies the examples, which I think may be ascribed to the same cause.

From every description of ardent spirits, therefore, those who have weak Stomachs should most religiously abstain. In support of this advice, I believe I shall find adherents; but there is another article in common use, that sobriety itself

. itself sometimes does not scruple to recommend, I allude to ale and strong beer.

These are certainly very different, both in their primary action on the Stomach, and their more indirect influence on the constitution. To forbid the use of these would to many appear to be an unwarrantable exclusion of all reasonable enjoyment, and will be disapproved of, no doubt, with great violence by those who have long been accustomed to the use of them, without discovering their pernicious tendency.

I will not deny that the moderate use of strong beer does not materially injure the constitution, and I will allow also that with respect to the Stomach it is even grateful and beneficial; but where its action is not qualified by air and exercise, it does produce such effects as should induce every reasonable person to be cautious in its use, more especially as these effects are insidious.

It is the opinion of many persons, that all these kinds of stimuli, whether ale, wine, or spirits, produce their impression on the system by the alkohol which enters their composition: this I do not believe.

In ale, there is a mucilaginous substance, a narcotic principle, very different in its operation from wine or spirits: the constant use of ale,

therefore, tends to produce corpulency, melancholy, head-achs, blindness, dropsy.

Ardent spirits produce dropsy likewise, but in a different way, by injuring the liver, and rendering it schirrous; hence the dropsy from this cause is generally ascites, the dropsy from ale, more commonly is anasarca, owing to the bloated state of the system, and the languor with which the fluids circulate.

Ale and malt liquors are more liable to adulteration (and to an adulteration of that kind that is the most pernicious) than spirits, though it is not necessary to refer to this adulteration for its narcotic effect, as they can testify who brew their own ale, many of whom I have heard complain of the same symptoms.

The narcotic effect of ale on some persons is very powerful, and produces even mental derangement. The most common effects are heaviness, languor, and hypochondriacism.

Of these I could produce several examples: the most striking I can recollect is a child who had been put out to nurse almost as soon as it was born. The child, from mistaken kindness, was constantly made to partake of ale and porter with the family, and when brought home from nurse, which was six or seven months after being weaned (eighteen months old), appeared a perfect

perfect sloth; it looked fat enough, but shewed a great disinclination for exercise, and when urged to walk fast, always burst out into tears: the bowels were costive, the stools white, and the livid tinge on the hands and arms shewed the languor of its circulation. This child was first well purged with calomel and jalap, which she took twice a week, and forbade the use of any beverage but water. This regimen in a few months completely changed her character, and restored her to vigour and animation.

This strange metamorphosis I had the fullest opportunity of witnessing, and do verily believe it owing to the discontinuance of malt liquors, and the means employed to remove the effects they had produced. With regard to this, as well as all other stimulating drinks, therefore, persons of a weak Stomach should practise temperance, and self-denial.

Exercise, properly regulated, may very essentially contribute to restore and strengthen a Stomach naturally weak. Riding on horseback was Sydenham's favourite exercise, by which he promised to cure every thing but the most confirmed consumptions. This should not be had recourse to immediately after dinner; it interrupts the process of digestion, and very frequently causes the heart-burn.

When the body has been in some degree exhausted by fatigue, it receives food with greater avidity, and converts it more effectually to its own use; hence we are told Cyrus made it a manner of law to the Persians, that they should never eat but after labour: and it is not improbable that the gymnastic exercises were suggested by the wisdom of some legislator, who knew how much the physical powers contributed to the strength of the political constitution.

Walking is the most natural and the most easy exercise, where the lungs are not in a state to prohibit it. Walking up an ascent is the best; as it brings the blood more effectually into that organ, respiration is increased, and the blood more completely oxygenated.

There is a species of exercise very little employed at present, though sanctioned by remote antiquity, I mean frictions with dry cloths, or by a brush. The ancients have said so much in favour of this remedy, and the practice continued so long, that we may reasonably suppose very salutary effects were produced by it. "In those bodies," says Boerhaave, "where none of the viscera destined to form the chyle discharge their office through a state of inactivity, the rubbing the abdomen with woollen cloths in a morning fasting has wrought wonderful effects."\*

\* Vid. Van Swieten's Commentaries, voi. 1. p. 67.

Galen recommends to all old men the use of friction with oil in a morning after sleep, and directs them to continue their accustomed labours, but with less vehemence.\*

With respect to medicine, numerous are the articles that class under the denomination of *Stomachics*. The most effectual stomachic, however, when judiciously applied, and that which in the first instance at least should be thought of, is an *Emetic*.

Dr. Cheyne, who paid a great deal of attention to the effects of emetics and other remedies adapted to improve the condition of the Stomach, says, "I know not in nature a more universal and effectual remedy for most, if not all, the symptoms of these disorders, when they rise to any high degree, than gentle vomits, suited to the strength and constitution of the patient."†

But the term Emetic is applicable to a variety of articles whose effects on the constitution are very dissimilar, and bear perhaps no affinity to justify their being comprehended under the same term, but that which arises from their power of producing vomiting; it will be therefore very necessary to consider their specific powers, for

\* Galen de sanitate tuenda, lib. v. cap. 3. chart. tom. vi. p. 144.

† Vid. Cheyne's English Malady, p. 206.

when we talk of administering an emetic, it must first be determined what emetic we shall give, before we can judge of its propriety.

All preparations of antimony, exclusive of their power of exciting vomiting, produce great nausea, and are followed by considerable debility; they relax the whole frame, and tend to bring on perspiration; hence they are calculated to do much good, or much harm, according to the indications and circumstances of the case.

They should not be given to a weak stomach, unless inflammation or fever is present, and then they are very serviceable. The best preparation is the tartar emetic; of which two or three grains should be given for a dose, if there be a quick pulse, and great heat on the skin. This preparation of antimony is best given alone, for its effects are beneficial even before vomiting is induced; when given to clear the stomach, on a supposition that it is foul, it is best combined with the powder of ipecacuanha, which is preferable to the wine.

When a person has had the gout, and especially if the Stomach has been threatened with an attack, antimony must not be administered. Some are in the habit of giving this remedy in small doses as a relaxant every night, which requires great caution, and is only justifiable under the

the circumstances I have mentioned, fever, or inflammation. By fever here, I mean that state of fever which is attended with a quick, rather full pulse, and an efflorescent skin: by inflammation, I principally understand that which affects membranes, as the peritonæum, mediastinum, pleura, &c. (which is more common than is generally supposed) and for which antimony may be considered a specific.

In stating that the exhibition of this medicine in small doses every night requires great caution, I speak from observation, as I am acquainted with instances of great oppression at the chest; and difficulty of breathing, threatening suffocation, arising from this practice: this, I think, may be explained, for as it is certain that the heart and lungs, as well as other viscera, do derive nervous energy from the Stomach, these will flag and fail to perform their functions when this organ is debilitated.

Hence I have more than once observed an intermission of the pulse for several days together proceed from the use of one drachm of oxymel of squills every night. I have from similar causes seen extensive ædematous swellings of the hands take place, which have been ineffectually treated as local complaints for several weeks, and afterwards cured in a few days without any local remedies at all, by merely strengthening

ening the Stomach, or removing something that disagreed with it.

There is a peculiar state of disease very incident to children, in which antimony proves fatal, yet is very often administered: the state to which I allude is that state of dyspnæa, apparently from a large collection of mucus at the chest, occurring often from hooping-cough, or dentition. Here the rattling in the breathing, and the ropy slimy mucus thrown up, seem naturally enough to suggest the administration of an emetic. In this case the debility produced by antimony in small doses, renders the patient incapable of vomiting, and the child dies often in three or four hours. Ipecacuanha would have agreed better, but in all such cases I have found calomel answer the purpose better than any thing else; and what is curious, it almost always acts in such instances as an emetic.

It is a misfortune in the science of medicine, that we are frequently unable to convey by language, the knowledge which is acquired by observation. This difficulty I feel at present in attempting to explain the effects of Antimonial emetics on children, a point on which I should be sorry to be misunderstood; and therefore shall endeavour to represent my ideas more distinctly by stating, that when a child, in the situation I

have

have just described, as labouring under an oppression of the chest from an accumulation of phlegm, is cold, pale, and languid; the exhibition of small doses of antimony, frequently administered, fails very often to produce vomiting, and is attended with fatal effects: but when the pulse is strong and hard, with great heat upon the skin, then antimony produces the most salutary effects, and should be given in a full dose. To children of three years of age, I have often administered three grains of tartar emetic without finding its operation too severe. It is a curious circumstance which I can vouch for from my own experience likewise, that its effect is frequently less severe than a smaller dose; for when given in the quantity now mentioned, vomiting takes place speedily, perhaps in less than half an hour, and the sooner it begins the slighter it is. When half that quantity has been given, it has remained in the Stomach for some hours, and then began its action, which has continued with violent strainings for a considerable time; but though I have often employed this medicine in the dose I mention, to children of this age, it must not be supposed that the dose should be increased to persons of more advanced years in a ratio at all proportioned to their years; on the contrary, many adults could not bear the

same

same quantity, and more I have seldom ventured to describe; for I have observed that grown people are not only more debilitated by antimonial emetics than children, but much longer likewise before they recover their strength, there being, to use an expression of Dr. Denman's, a kind of *resilition* in the junior patient, which is not found in the adult. Such are the effects of the antimonial emetics.

It is a common idea, that the intention of an emetic is merely to clear the Stomach; and as this is not always necessary when it is recommended, it was not easy to convince the patient of the propriety of the practice, but this is the least advantage attending its use.

Vomiting, while it has the effect certainly of relieving the Stomach of its contents, tends likewise to emulge the biliary ducts, to increase the secretions of the gastric and pancreatic juices, and to diffuse an energy to every part of the system; it is, therefore, often advisable to administer it when there is no reason to suspect any foulness in the Stomach.

In cases of dyspepsy, the benefit it imparts is probably to be attributed principally to its power of increasing these secretions, as they chiefly contribute to the process of digestion.

An

An emetic may be safely given and repeated in the most delicate habits, and for the relief of a weak Stomach is advisable, as a prelude to other medicines, especially if there be any reason to suspect an acid in the Stomach, which is to be judged of from an heart-burn, flushing, and redness in the face, and hiccup. This acid arises from a defective secretion of Bile.

A vast variety of remedies have been recommended for the purpose of strengthening the tone of the Stomach, of which it is not an easy task to appreciate the respective virtues, as particular idiosyncracies in the constitution, more perhaps than the peculiar qualities of the drug, produce a difference in their effects; yet I think I can state from observation, that, of the vegetable bitters, the infusion of quassia is preferable to most. I have given it with success where gentian, camomile, bark, &c. have not answered the purpose.

When the Stomach is constitutionally weak, it cannot be expected that any medicine, or any regimen, can impart to it a vigour which it does not naturally possess; all that we can hope to accomplish, is to restore it when impaired to its original standard.

Rhubarb, in small doses once a day, is a most valuable remedy in cases of this description, and when

when acidity prevails, should be administered in combination with kali or test. ostrear. When dyspeptic symptoms prevail, in a habit not much disposed to be affected in that manner, the first object of enquiry should be the cause of their appearance, as it will be generally found to be a sympathetic effect originating in the derangement of some other organ in the body, and to this the remedy should be directed.

### OF PAIN IN THE REGION OF THE STOMACH.

A PAIN in that part of the body where the Stomach is known to be situated, is so frequently the subject of complaint, and originates from such a variety of dissimilar causes, that few subjects in pathology can more justly demand our attention.

On entering into the investigation of these complaints, the first circumstance to be observed is this, that a pain referable to that part, is no proof at all that the Stomach is the organ to which our remedies should be directed. Such a precipitate conclusion has been productive of considerable mischief, and therefore I wish strenuously to caution the reader against so hasty a decision.

Though

Though the pain may proceed from spasmodic contraction of the Stomach, that will generally be found to be occasioned by the derangement of some other organ, or of parts very remote from the Stomach itself. The exhibition of opium, or some similar medicine, by diminishing Spasm, will probably afford temporary relief; but this is palliative and transitory. In a short time, from the continuance of the primary disease, the Spasm returns with augmented violence; and these repetitions injuring the health, the patient often sinks under a disease that might have been readily cured in the first instance, if rightly understood.

When a person complains of pain in the Stomach, the first material question to be ascertained is, what is the cause? taking it for granted that the Stomach is only acting a secondary part. In young women, and females whose menstruation has been accidentally obstructed, this is a very general cause, and to the restoration of that function, of course, the treatment should be directed. It is sometimes the consequence of a stone in the kidneys, and not uncommonly owing to a stricture in the urethra, the suppression of an habitual evacuation, as the piles, or the healing an ulcer of long continuance will produce it. Inflammation, especially membranous in-

flammation, in any part of the abdomen, will give rise to it; but the most frequent cause, I believe to be, a want of a due secretion of Bile into the duodenum: gall-stones contribute to the same effect, not merely by the interruption they occasion to the free passage of the Bile, but by their mechanical irritation as foreign bodies.

From these remarks, it will appear probable, considering the variety of causes capable of giving birth to the disease, that not in one case out of seven is the Stomach itself in fault.

Another observation, which it is desirable from its practical tendency to be acquainted with, is this: Spasm in one part may proceed from inflammation in another; and that which is calculated to lessen the original affection, is therefore best adapted to cure Spasms of this description.

In laying some stress upon this observation, I am actuated by the recollection of cases, in which I have witnessed the most unsuccessful practice, from neglect, as I supposed, of this discrimination.

There is a certain degree of alarm and apprehension always connected with Spasms in the Stomach, which intimidates many persons from pursuing any plan calculated to diminish the strength of the system.

In nine cases out of ten, I might even venture to say, nineteen out of twenty, where *Spasms* in the Stomach are the subject of complaint, æther and opium would be employed, when probably bleeding or blistering, or even antimony and digitalis are the remedies to which we should apply. I am sufficiently apprised that in many instances the treatment I now mention would prove highly prejudicial.

Where there is something gouty in the habit, this treatment must never be suggested; and the accidents which have occasionally occurred from the misapplication of these means, afford the best and most plausible reason for their not having been used when required.

On this point I hope the reader will give me credit for speaking not from theory, but experience; and indeed, from considerable experience I can affirm, that the greater proportion of cases of Spasms in the Stomach are to be cured by the remedies I have just now enumerated.

Indigestible food, or any foreign substance remaining in the Stomach, will likewise produce Spasms, and it cannot be expected that bleeding, or digitalis, should here prove a corrective.

The poison of lead, as is frequently found to be the case with the artificers, who are engaged

in handling that metal, as well as mercury, occasions spasms in the Stomach ; but he must be a very ignoramus who would think of administering relief in either case by antiphlogistic treatment.

With respect to food, it may be well to know that it may disorder the Stomach at a period very distant from the time of its being eaten. We are apt to enquire, on the occurrence of spasmodic affections of this organ, if the patient has eaten any thing that day, or the day before, likely to disagree, but we ought to go back much farther. I have known an instance of a person violently affected with spasms in the Stomach every day for four months, which appeared evidently to arise from eating a large quantity of oysters.

As this symptom of which I am now treating proceeds from such various causes, it is necessary that we should be exceedingly circumspect and inquisitive ; and where we cannot immediately ascertain the cause, by examination and enquiry, it would be better to watch the progress of the case, and attend to the juvantia and lædentia; rather than hastily to adopt a very decisive practice, which, if misapplied, might prove highly prejudicial. These general remarks will be best understood by enumerating the facts on which they are founded ; for, as Lord Bolingbroke says of History,

History, " that it is philosophy teaching by example." So physic ought to be founded on actual experience: this is the Hippocratic system, and it is the knowledge which is thus acquired, that can alone contribute to the benefit of mankind.

### CASE.

*Of Pain in the Region of the Stomach for several Months, apparently from a Stone either in the Kidneys or Ureter.*

J. B. complained of a violent pain just below the sternum, which comes on generally in the afternoon, and is become so excruciating that he thinks he shall not be able to survive, if it be not speedily relieved: he has been subject to it, in a slight degree, for several months. At first, it came on only in consequence of fatigue or exertion, but lately it has been very acute, and seems to recur as an established habit, rather than from any occasional excitement. This patient is a carpenter, of a middle size, and a pale emaciated countenance, so much so, that an indifferent observer would be likely to pronounce him labouring under some formidable disease.

When a person has a stone, or an inflammation, or abscess in the kidneys, I think it is al-

ways accompanied with a peculiar cast of countenance, which it is difficult to describe, somewhat similar to that which is the effect of fluor albus in women; a languid look, with a little sallowness. On investigation I found he had been subject to a pain in the groin, extending to the loins, for several years, and now the urine is always tinged with blood, giving it the colour of mahogany; and if any violent exercise is made use of, the blood is not merely diffused through the urine, but precipitated in considerable quantity to the bottom of the glass. The general health of this patient is greatly impaired: he feels much debility, and uncommon depression of spirits, though not of a hypochondriacal character.

It is very evident, in this instance, that the disease of the kidney had produced the spasm in the Stomach, and that if this could be cured, the spasm would not recur.

When a patient feels extremely debilitated at the same time that the action of the heart continues to keep up with tolerable vigour, the Stomach generally is the part in fault.

*Of Pain in the Region of the Stomach cured by Bleeding, supposed at first to proceed from Gout.*

I was desired to visit a gentleman a few miles out of town, who was said to be dying from an attack

attack of gout in the Stomach. On my arrival I found him labouring under very acute pain, which had lasted now three hours without intermission, and within a short period he had swallowed a hundred drops of tincture of opium without feeling any mitigation of his sufferings, or indeed any sensible impression. This person was a gentleman of fortune, who had been very intemperate in his living, had a florid pimpled face, and had long been disabled from walking much, from a kind of rheumatic gout, which created a suspicion of the present attack being a translation of that disease to the vital organs: under these circumstances, I should not have risqued the censure which would have attended blood-letting, in the event of the case proving fatal, but for the following reasons,

The patient discovered no marks of syncope, or fainting. He felt a violent fixed pain at the pit of the Stomach, with a sense of constriction, as if he were bound round with a cord, and this pain had continued without intermission for several hours. These symptoms bore no resemblance to the transition of gout to the Stomach, which occasions great debility and faintings, and is almost instantaneous in its effect. From these considerations, and the state of the pulse, which was not quick or fluttering, I confidently pro-

posed bleeding, which gave great relief, and the pain entirely subsided in five or six hours. Some gentle opening medicine was afterwards recommended, with fomentations to the scrofula cordis. I believe the exciting cause in this instance was the keenness of the air, acting on a constitution habituated to breathe the milder air of the metropolis, and affected at the time with some degree of membranous inflammation.

### CASE

#### *Of Pain in the Region of the Stomach, from the Poison of Lead.*

The propensity to christen a disease, as I have sometimes heard it expressed, is so prevalent among people in general, that a medical man is not supposed to be familiar with a complaint to which he cannot readily affix a name; and for the same reason it is necessary that a practitioner should be guarded against any representation made by those who are not conversant with disease. The case which I am now going to describe was stated to me *to be certainly* inflammation of the bowels, though it appeared, on close investigation, to be a disease of a very different description.

A gentleman was seized with pain near the navel, at first rather slight, but gradually increasing:

creasing: in the course of twenty-four hours it became very violent, and from being a continued heavy obtuse pain, it now suffered slight intermissions, but of no long continuance. Aperient medicines had been given in the first instance, but without effect; and on enquiry it appeared there had been no discharge from the bowels for four days. The patient was a robust strong man, about forty-four years of age.

These symptoms had lasted two days when I was requested to visit him, and at this period of the disease I found the warm bath had just been employed, and previous to that, fomentations, but without material benefit, and it was in contemplation to employ the lancet. The pulse was at this time full and strong, 120 in a minute, and the pain severe. From the state of the pulse, connected with the severity of the pain, I was convinced the symptoms were not referable to inflammation of the bowels; and the stimulus of the bath, with the exertions consequent on its use, explained in a great degree the acceleration of the pulse. The circumstance, however, which most satisfactorily illustrated the nature of the complaint, was the business in which the patient had been occupied. He was a manufacturer of white lead, and had for some time previous to this attack been constantly employed

ployed in that occupation: this consideration induced me to propose bleeding, and as the pain was now obviously spasmotic, to recommend opium. He took at first thirty drops of the tincture, and in a quarter of an hour repeated it, with a sensible diminution of the pain; the opium was increased to a hundred drops, and the complaint in two or three hours almost entirely subdued.

In this case I have reason to believe, if bleeding had been employed, it would have proved highly prejudicial, and in all probability have produced a palsy of the extremities, an effect very generally found to arise from the operation of lead upon the system. It is a curious circumstance, that after the Spasm had been relieved by the opium, purgatives took effect; and calomel, with an emulsion of Ol. Ricin. with Tinct. Sennæ, produced free evacuations, and no recurrence of the pain afterwards took place.

In stating it as my opinion, that bleeding would have produced a palsy of the extremities, I found the remark on what I have witnessed relative to the action of lead. Those who are employed in the management of that metal are for a long period of time able to resist its influence, or at least are not affected with any weakness in their

their extremities till the general system has been injured. It is not till they have had repeated attacks of pain in the bowels (called by way of distinction painter's colic) that the tremor of the hands and an inability to move take place. Any plan adopted at this period calculated to increase the debility of the system, increases likewise the tendency to this kind of paralysis, and bleeding, therefore in particular, would be most unseasonably recommended to remedy complaints of this description. This case points out the necessity of our attending in all investigations of disease to the habits of the patient, which will frequently be found either to predispose to, or produce the complaint under which he labours.

### CASE

*Of Pain in the Region of the Stomach, from Cold caught by leaving off habitual Cloathing, producing peritoneal Inflammation.*

I have stated it as my opinion, that the most frequent cause of Spasms in the Stomach, is a deficiency in the secretion of the Bile, and this sentiment I am not disposed to abandon; but that which may be mentioned as the cause next to this in point of frequency, is the one now alluded to, and which ought to be clearly understood and distinguished, that the remedies best calculated

calculated to relieve it may not be misapplied.

To facilitate the discrimination, I think it right to premise, that persons who are of a delicate constitution, or have become so from leading a confined life, and living in warm rooms, are rendered so extremely susceptible of cold, that the slightest variations of temperature, and alterations in dress become the foundation of disease, and of this disease in particular, *membranous inflammation*, the symptoms of which I shall now attempt to enumerate.

The patient first perceives an unusual coldness and chilliness, more or less violent, according to the violence of the cause to which he is exposed. If a person just recovering from lying-in, should chance to go into a damp cellar or kitchen, and remain for some time, the impression is often so forcible and instantaneous, that the patient has said she felt struck with death; but between this violent attack and the mildest degree of cold, there is every possible variety. Yet in almost all instances, if the patient take pains to recollect, she can discover some period when this sense of chilliness affected her.

In this investigation, it is frequently necessary to go back to a very remote period, frequently to five, six, and seven years previous to the present, before we can reach the commencement of the disease.

disease. Nothing but experience could prove this fact ; and it is from the most satisfactory experience I state, that during the longest space of time now mentioned, this chronic inflammation will continue, varying in degree, and sometimes apparently ceasing during the summer months, and whilst the patient remains perfectly tranquil and inactive; but again returning on the approach of the winter's cold, and terminating at length in the most extensive adhesions.

The seat of this disease, in some measure, depends on the mode of dress, but the peritonæum lining the cavity of the abdomen, is most commonly affected, there is, therefore, very often felt a heat and slight pain in making water, the patient becomes hot and feverish every night when warm in bed. These symptoms are aggravated by using much exercise during the day, to which there is generally great disinclination. A pure country air, so grateful and salutary to invalids in general, here proves too stimulating, sea-air in particular; and this is one circumstance which should lead us to suspect the disease I now speak of.

In the first stage, while inflammation is going on, the countenance is subject to sudden and violent flushings, which are excited by the stimulus of food, or strong liquors. In the

the more advanced stage, when inflammation has terminated in adhesion, the countenance is pale, languid, and inanimate, and the spirits exceedingly depressed, with a tendency to shed tears: the voice is likewise very low and depressed, owing to a kind of internal sinking; pain sometimes in the left side, and a sensation as if something dragged inwardly.

When the disease has made some progress, if the patient make an effort to reach any thing above the head, it is found to be painful, and often impracticable in consequence of the adhesions which have taken place. For the same reason, walking fast, or any sudden or violent exertion, gives pain and uneasiness; and the body is very often bent forward instinctively in a curved manner. The shivering, which at first marked the origin of the disease, continues to recur frequently, but without any regularity, and thus forms one characteristic mark of distinction between this disease and intermittent fever, to which, in many points, it bears a striking resemblance.

To pursue the history more minutely would lead from the object of the present publication; and therefore I content myself with observing, that when it has run on a long time without being perceived, the adhesions, which are the effect of the inflammation, at last impede the func-

functions of the part; the patient from this cause gradually becomes weaker, and sinks perceptibly away, till death terminates the disease.

Not unfrequently symptoms of dropsy appear towards the conclusion, sometimes ascites, occasionally anasarca; and a practitioner, who is called in at this period of the disease, would be liable to be deceived, unless properly informed with respect to the progress of the case.

Inflammation, as is well known, terminates in different ways: the phlegmonous in suppuration, or the formation of pus, &c. but the species I now endeavour to describe almost always in adhesions, especially when the patient is delicate and feeble; in which it would seem as if the constitution had not vigour enough (to use an expression of Sydenham's) for the *concoction* of pus.

I believe it is not generally supposed that adhesions, in consequence of internal inflammation, produce such fatal effects; and it is certain, that we find on dissection repeated proofs of extensive adhesion having continued for some time in persons who have died of a complaint quite unconnected with their operation; all this I admit, for it is what I have myself repeatedly witnessed on the examination of morbid bodies: yet I can confidently affirm, that the same state

of parts in a more considerable degree, does produce the serious consequences already alluded to.

I am disposed to consider this part of pathology as peculiarly interesting and important; in the first place, because the obscurity of the symptoms tends very much to deceive both the patient and the friends, and leads to error both in practice and theory. The reluctance to exercise, which originates in disease, is often referred to indolence and sloth, and the depression of spirits to a kind of untoward despondency, which the patient might get the better of if she chose to make proper exertion. These conclusions, while they add severity to affliction, lead to the neglect of remedies whose success depends on the promptitude of their application. In the first stage of the complaint, every thing may be hoped for from proper means, but when the inflammatory state has entirely subsided, and the derangement of the health proceeds from the adhesions produced, I know of no remedy that can avert the danger, or effect a cure.

I thought it advisable to preface the cases I aim about to describe by these preliminary observations: they will explain, in some measure, the modus operandi of the remedies I have so successfully administered, when the disease has not

not attained that stage which I have represented as incurable.

Miss E. aged 29, consulted me about a twelve-month ago on account of a complaint in her stomach, to which she had been subject for three years; she felt an acute pain *at times*, especially if she attempted to run, and a violent fluttering almost constantly where that organ is situated; her appetite was very much impaired, and her strength proportionably diminished, but the most striking peculiarity in her case when I saw her, was the paleness and want of animation in the countenance. She is disposed to attribute the origin of her disease to an exertion made three years ago in assisting the servant to make a bed, when she felt something break on a sudden within the abdomen, and was immediately seized with a violent fluttering at the Stomach, which has ever since continued. Menstruation is regular, and the bowels natural. She used the following means, which were varied according to the indication of the case:

Liniment Ammoniæ fort. Ventriculi  
regioni bis die. infriand.

Mist. Camph. ʒv.

T. Lavend. Spt. Æther. Nitros. aa. ʒss M.

Capt. Coch. iij. ampl. bis die.

Emp. Cantharid. lateri sinist.

Mist. Ferri Compos. as recommended by Dr. Griffiths.

Tinct. Digital. g<sup>t</sup> x. Syr. Papav. Alb. Spt.

Æther. Nitros aa ʒi. Lact. Amygdal ʒj.

M. ft. Haust. Hor. Somni sumend.

These were recommended from the appearance of dropsical symptoms, which now began to take place. A variety of different medicines besides were occasionally administered during the progress of the disease, but without any lasting benefit. The mixture with myrrh and steel at first promised to be of service, as by imparting a degree of energy to the stomach it suspended for a little while the progress of decay. The pulse towards the decline of the disease, became feeble and accelerated; the stomach so weak that few things would remain upon it; the abdomen was enlarged by a fluid, but not to any considerable extent; at length sickness and vomiting took place, every thing swallowed was immediately rejected, and for several days a blackish fluid, like coffee-grounds, was thrown off almost incessantly by vomiting, which at length terminated in her dissolution. This case is highly interesting and instructive, and exemplifies the necessity of taking the whole history of a disease under the compass of our view, in order to form an accurate diagnosis.

Within the last five weeks every thing which was swallowed, appeared to lodge at a certain spot,

spot, where it seemed as if some permanent obstruction proved the impediment to its progress; so that any one at this time might reasonably have suspected a schirrous state of the pylorus.

I had an opportunity of examining this subject after death, in company with Mr. Taylor, an intelligent apothecary in Goswell-Street, and Mr. Taunton, the ingenious Lecturer on Anatomy in Hatton-Garden, who performed the dissection, and had attended with us the latter stage of the disease. The appearances satisfactorily unravelled the symptoms, the whole peritonæal coat lining the interior surface of the abdominal muscles was thickened to a remarkable degree, and the small intestines so completely bound together by the coagulable lymph which had been thrown out, and had formed small membranous bands, stretching across from one portion of the intestine to another, as to interrupt their peristaltic motion, and make them appear exactly as if they were frozen together. The whole volume of the intestines being condensed into one mass, and the large arch of the colon contracted to the size of the ileum.

Adhesions had formed in various points by the same kind of membranous filaments to the stomach itself; and it is highly probable, that one of these being lacerated by the exertion in shak-

ing the bad, occasioned the sensation which was then felt, and the fluttering which followed it; all the other viscera were in a natural and healthy condition.

From the state of the intestinal canal, it is really wonderful that the food could pass forwards at all; that it did for a long time pass very slowly, and with much difficulty, there is no reason to doubt; and when the disease attained that point where the power of propelling the food onwards was exhausted, then came on the sense of obstruction at the pylorus, and the regurgitation of every thing taken into the stomach. The same state of the bowels explains the languor and lassitude so visible in the countenance, and frequently observable in young children when their bowels are overloaded with indigestible food; they are languid, pale, inanimate, and dejected; a smart dose of calomel, by evacuating the contents of the primæ viæ, and carrying off a quantity of putrid matter, generally succeeds in restoring them to their natural vivacity.

Muscular action, and nervous energy, depend very materially on the due degree of tone and vigour in the stomach and bowels, and whatever interrupts their functions produces great prostration of strength, and dejection of spirits. The debility

debility thus induced is to be cured not by administering strengthening remedies, but by taking off the cause. Thus when it proceeds (as it often does) from internal inflammation, bleeding is the remedy, however alarming the debility; if, on the other hand, it arise from a quantity of putrid matter, which cannot by the natural efforts of the system be thrown off (which is another common cause), purging is the important antidote, and the most effectual restorative; it being always proper to remember, that under such circumstances the strength is depressed, not exhausted. This reasoning will apply to the case now under consideration.

In this case nothing favorable could be expected, as the cause that interrupted the functions of the viscera could not possibly be removed by the power of medicine. This unfortunate case was clearly referable to the patient's indiscretion with regard to cloathing; for about five or six years previous to her disease, as the mother informed us, she would dress in a very slight manner, and left off flannel, which she had been accustomed to wear, though frequently remonstrated with on the impropriety of her conduct, and forewarned that she would suffer for it at some future period. This exposure to cold, by checking the matter habitually thrown off from the

surface of the body, undoubtedly produced the disease, with all its formidable consequences.

*Of Pain in the Region of the Stomach, proceeding from a rheumatic Affection of the Abdominal Muscles.*

It is necessary to be very careful in guarding against the deception to which we are liable to be betrayed by the false representation of patients in describing their complaints. The case I am about to describe will shew the propriety of the observation.

A person applied to me a few weeks ago, in consequence of a complaint in his Stomach, as he described it, and as he had been taught to consider it by a Medical Practitioner of eminence, whom he had previously consulted. He was nearly fifty years of age, accustomed to an active, and occasionally, a laborious life, and had been afflicted with this disease almost eight months.

The pain was seated just below the sternum, and sometimes extended towards the left side: it observed no regular periods of attack or intermission; seldom entirely subsided; but became aggravated at times without any obvious exciting cause: his appetite was good; his sleep very much

much disturbed by the violence of the pain, that now seemed from its continuance, to reduce the strength of his constitution.

The bowels were rather costive, but the countenance presented no indication of Hepatic affection; he sometimes was troubled with the heart-burn, and had formerly drank freely; the tongue was rather white; he felt a soreness at the Stomach; he used the following remedies:

R Submuriat. Hydrarg. gr. v.

Pulv. Jalap gr. xv. M.

ft, Pulv. man. Sumend.

Operated four times; felt somewhat better in general health, but the pain not diminished.

R Mistur. Camphorat. 3x.

Æther Vitriol. 3fl.

Tinct. Thebaic g" v. M. ft.

Haust. bis die. Sumend.

No material alteration, especially with respect to pain. After using this a few days, the following was prescribed:

R Ol. Amygdal

Tinct. Opii Camphorat. aa 3j.

Pulv. Gum. Acaciæ Dij.

Aq. Meuth. 3x. M. ft.

Haust. bis. die. Sumend.

No amendment.

He had recourse to other medicines without effect, all being directed with a view to alter this supposed morbid condition of the Stomach. On examining him very closely relative to the cause of his illness, which at first he professed himself ignorant of, he stated that it *might, perhaps,* have been occasioned by standing in a current of air with his waistcoat and shirt open when he was in a perspiration. I immediately suspected it to be a rheumatic affection, and recommended the following remedies:

R Pulv. Ipecac. Compos. 3j.

Pulvis bis die. Sumend,

R Ol. Camphorat. 3fl.

Ol. Anisi 3j.

Tinct. Opii. 3ij. M. ft.

Liniment. quocum optim. pars affect. illin<sup>r</sup>

These, in the space of two days, gave him considerable relief; he slept better than he had been able to do for several months, but the nausea and head-ach produced by the powders, made him wish to discontinue it. I therefore ordered him the Tinct. Guaiaci Volat. 3fl. twice a day, which completed the cure in a week. I omitted to mention in the first part of the description, that he had applied a blister without finding much relief.

I am decidedly of opinion that the partial application

plication of cold to particular parts of the body, producing this kind of rheumatic pain, often misleads the judgment of the practitioner, by creating a suspicion that some organ is diseased in the vicinity.

When rheumatism happens to be seated in the region of the Stomach, it may be distinguished by the following symptoms:

1st. The pain is not so violent and spasmodic, but more permanent than pain in the Stomach itself generally is.

2nd. It is not so circumscribed, but extends to the side, sometimes to the back, and is affected by changes of temperature.

3rd. The pain is increased by the action of particular muscles, by raising the arm or inclining to one side, which has not in general an influence on pains in the Stomach.

4th. The appetite is not impaired; neither is there much flatulence, which more or less will be found to attend complaints of the Stomach.

5th. The countenance retains its ordinary appearance of health; and, Lastly, attention to the cause and manner of its approach.

*Case of a peculiar State of the Stomach from taking Cold under the use of Mercury.*

Well authenticated facts, though they may not admit of an explanation, deserve to be recorded, since they add to our stock of useful information, and are often of service in teaching us to avoid what we may not be able to remedy. The danger of exposing the body to great irregularities of temperature when under the action of mercury has repeatedly been pointed out, and the impression produced upon the Stomach by such a course is strongly exemplified in the following case:

Mr. A. thirty-one years of age, asserts, that he possessed naturally a constitution of uncommon strength, and was subject to no indisposition till eighteen years of age, when he was obliged to use mercury very freely for a Siphilitic complaint. He did not suffer this, however, to subject him to any restrain, and having danced the greater part of one night, and the following day exposed himself for several hours to a cold damp atmosphere, on a shooting excursion, he caught cold, and was confined to his bed upwards of two months: he was, during this period, affected with violent fever, and a general eruption came out on the whole surface of the body, like Leprony;

prosy: this, by degrees, disappeared, and the cuticle peeled off from the whole surface of the body.

For two or three years after this, he was subject to a desquamation of the cuticle at the same period of the year, but now it only happens in consequence of taking mercury, and this constitutes the peculiarity, which, in my opinion, entitle it to be noticed in a work on Disorders of the Stomach. One single grain of calomel, or any other preparation of mercury (for he has since tried several, under different Practitioners), in the course of an hour produces a violent burning pricking heat on the surface of the skin, beginning first with an itching and stiffness upon the fingers. This is a certain prelude to a salivation, which is always accompanied with the same kind of leprosy and falling off of the skin: the salivation is violent, and continues for weeks, attended with a spasm on the mastoid muscle, producing a partial locked-jaw. In addition to this, an inflammation arises in some part apparently from the deposition of a matter floating in the system. At one time the knee was so much enlarged by inflammation as to be almost as big as his head; at another time, the eyes were violently inflamed: wherever it has fixed

it has continued upwards of two months: it does not affect two parts at the same time; when the joints are affected, the eyes and throat are not. He is very subject to rheumatism since the commencement of these symptoms, but never felt it before. The best remedies for the relief of this *Mercurial Disease*\* are the magnes. vitriolat. in sufficient doses to keep the bowels freely open; and acids of every description. I have twice cured him by this plan of treatment, and found the nitrous acid particularly beneficial.

This case affords great scope for physiological disquisition.

What is the effect produced on the Stomach in this instance?

It cannot be doubted, from the suddenness, with which the symptoms arise, that they proceed from a change on the Stomach, and not from any alteration in the fluids of the system.

De Haen and many other authors have taken notice of the falling off of the cuticle from the hands and feet, as an effect that generally en-

\* This term is applied by Mr. Mathias, Surgeon, to an assemblage of symptoms produced by mercury on the constitution; but he has not entered minutely into the consideration of this affection, which may be called *Lepra Mercurialis*. His Work is highly entitled to attention.—Vide Mathias on *Mercurial Disease*.

sues from arsenic, but arsenic, we know, has the power of exciting a violent inflammation of the Stomach, and even of corroding it. Mercury operates in a different manner: the effect in either case forcibly illustrates the reciprocal action subsisting between the Stomach and the Skin.

### OF LIENTERY.

THE Lientery is a disease in which the food that is taken into the Stomach, instead of remaining a sufficient length of time to undergo the process of Digestion, is almost immediately thrown forward through the bowels, and passes out of the body unchanged.

The disease in its more temperate form, is of no uncommon occurrence, and seems to proceed from a morbid irritability of the lower orifice of the Stomach, or from a want of contractile power at that part. One of the most extraordinary circumstances attendant on this complaint, is the rapidity with which the food, taken in, seems to be conveyed through the alimentary canal. It is well known that the length of the intestinal canal is about six times as great as the height of the subject; yet patients afflicted with this complaint frequently aver, that the food they take in is rejected by stool in less than

than five minutes from the time of its being swallowed. The disease is clearly referable to a morbid condition of the Stomach.

The following case, which exhibits many peculiarities, is copied immediately from the patient's description, with considerable minuteness.

### CASE.

Richard Crouchman, æ. 31, in June 1809, after fasting the whole day, during a residence in Egypt, eat a large quantity of white grapes, and the following day was attacked with a violent gripping pain at the Stomach, attended with diarrhoea, which has continued without one day's intermission, though occasionally with diminished violence from that period to Jan. 7th, 1811, when he first came under my care. He had been confined five months at Malta as an invalid, and used such means as were recommended by the medical men to whose care he was entrusted, without receiving any benefit, and has since tried various medicines without effect.

The discharge from the bowels is so thin and watery, that he is not able to retain it as he walks along, and, for the last ten months, has been obliged to get up out of bed frequently in the night to change his drawers, which he wears constantly. Food of every description lies heavy at

at the Stomach, till it has passed off by the bowels, which it constantly does in a few minutes, and then his appetite becomes as voracious as if he had eaten nothing at all.

Milk always comes up in two or three minutes, by vomiting, curdled, and the rejection of this or any other substance is accompanied with a bitter taste in the mouth. His tongue is white and furred, and he complains of constant thirst.

Oily and greasy substances, especially boiled fish, with oil spread over it, agree better with his Stomach than any other article of diet.

Beef is altogether indigestible; mutton not so much so, and boiled meats seem more congenial to his appetite than roasted.

Large quantities of slime occasionally came away from the bowels: he never took an emetic for the relief of this complaint, but felt some benefit when vomiting accidentally came on. Has not perceived any sense of burning heat at his Stomach; and what appears to me still more extraordinary, has not felt the heart-burn, or any sourness rising from the Stomach; neither has he been troubled with flatulence. I prescribed the following remedies, which cured him.

Jan. 7th, 1811. R Test. Ostræar. 5j.

Pulv. Dover. gr. v. M. ft.

Pulv. omn. Noct. Sumend.

R Tinct.

Rx Tinct. Opii. Camphorat.  
 Ol. Amygdal. aa ʒj.  
 Pulv. Gum. Acaciæ ʒf.  
 Aq. Meuth. Pipeit ʒx. M.  
 ft. Haust. bis die. Sumend.

In the course of twenty-four hours from the time he began taking these medicines, he felt considerable relief; the purging diminished, and the general irritation of the system subsided.

Jan. 9th. Continues to improve.

Rep<sup>t</sup>.

Jan. 18. Materially better in every respect: instead of eighteen or twenty stools a day, only two or three. Continued the medicines therefore without alteration or abridgement to the 23d, when he considered his recovery so complete, as to render any further perseverance unnecessary.

The success in this instance, considering the duration of the disease, was greater than could have been expected. It is not easy to explain the modus operandi of the remedies. I should think it most probable that a certain acrid matter lodging at the pylorus was neutralized by its combination with the testaceous powder; and the irritation produced by it, removed by the emollient medicines given in combination with it.

Dr<sup>r</sup>

Dr. Harris, a practitioner, (celebrated for his success in the Diseases of Children) long ago pointed out the excellence of the testaceous powder in acidities of the primæ viæ; and the experience of succeeding practitioners bears testimony to the justice of his commendations.

I believe it frequently fails to produce its good effects, by being administered in too small a quantity. Dr. Heberden recommended an ounce at a dose; and where so much is requisite, it cannot be supposed twenty or thirty grains can answer the purpose. The treatment above described will not always succeed to our wishes, as I have ascertained by the following case :

*Case of Lientery cured by the Dry Vomit.*

S. C. a female, æ. 21, has, for seven months, complained of an irritation in the Stomach, similar to that in the preceding case.—Every thing, whether liquid or solid, in a few minutes, passes off by stools, which are never firm and solid, but frothy and watery. She is regular in menstruation, and has no other complaint. This she attributes to cold; has tried a variety of medicines without any advantage: among others, the chalk mixture, tinctura japonic. Pulv. Dover.

Decoct. Cinchonæ, and different kinds of astringents. When she applied to me, finding tonics and corroborants produced no good effect, I recommended the Testæ Ostrear. 3j. twice a day; and Pulv. Rhæi. 3*oz.* at night, but without success. I then advised a brisk dose of Calomel and Jalap, to dislodge something that I suspected acted as an extraneous body, and kept up an irritation: this was not attended with any evident relief, though it certainly did not increase the inclination to go to stool. A few other medicines, which I cannot now recollect, were tried likewise, but without any amelioration of the disorder; therefore prescribed the following:

R Cupri Vitriolat.

Antimon. Tartariz. aa gr. ij.

Aq. Distill. 3*j.* m. ft.

Haust. vesperi Sumend.

I advised her to let this act, without drinking any thing to encourage the operation; the vomiting, and not the nausea of the emetic, being the effect I wished to produce: she adhered to the instruction; it operated rather powerfully five or six times; and though it did not bring up any thing more, apparently, than the common contents of the Stomach, it produced a surprising alteration in the disease.

I recommended her to remain a week without taking

taking any medicine, to ascertain with greater precision the benefit she had derived: at the expiration of that time I saw her, and found her much better than she had been for several months, but not quite recovered; I therefore proposed the repetition of the Emetic, and this cured her.

The Emetic described above has been called the Dry Vomit in contra-distinction to other Emetics, with which it is customary to recommend the liberal use of some diluting liquors to aid its operation. This point deserves some consideration; if much is drank before an Emetic operates, it is very likely to produce an effect upon the bowels, which would frequently frustrate the views of the prescriber, one of which often is to reverse the existing action of the alimentary canal.

Emetics of every description are variable in their operation, because their effect is regulated by the nervous energy of the Stomach, to which they are applied; the same dose, therefore, of the same medicine may act upon one person with violence, on another with moderation; and the Emetic now mentioned is liable, with all others, to the same vicissitudes; operating in one instance with freedom, at other times with

moderation ; and in several instances that I am acquainted with, it has failed to excite vomiting at all : when this has happened, it produced a metallic taste in the mouth, which has continued several days, and is frequently attended with slight Spasms at the Stomach, and griping pains in the bowels.

*Case of Pain in the Stomach, attended with a Sensation of violent Hunger, cured by Testæ Ostearum.*

Tho. Mitchell has, for four months, complained of a violent Pain at the Stomach, without any assignable cause: within the last month the pain has been more than usually acute; he feels at times very faint, but is always so hungry, as to be eager to devour any thing eatable.

Has had no reason to suspect the existence of worms.

His face is very much inclined to flush up, and become red, with giddiness in the head, and weakness in the eyes; never drinks spirituous liquors, and is, in every respect, temperate; has been constantly thirsty for the last two years; palms of the hands and soles of the feet always cold.

Prescribed April 30th, 1810.

V. S. 3vij.

Magnes. Vitriolat. 3j. venæsectione peracta  
Sumend.

Better for the bleeding, and the drowsiness much relieved. I omitted to mention, that, at this season of the year, for a few years past, he feels a numbness in both arms on the approach of warm weather.

May 2d. Capt. Test. Ostrear. 3j. ter die.

4. Considerably benefitted; does not feel the usual gnawing sensation at the Stomach, and the stools are regular.

7. Has continued the same medicine regularly, and is better decidedly than he had been for months: continued the same to the 10th.—  
*Cured.*

*Of Pain in the Stomach, proceeding from Gall Stones.*

The variety of causes capable of producing Pain and Spasm in the Stomach, render it an indispensable duty on the part of the Physician to be vigilant and inquisitive in his investigation. I have already represented Gall Stones to be a

very frequent cause of spasmodic affection in this organ; and the following symptoms point out their existence:

A Pain in the right side; not constant, but occasional.

An irregular state of the bowels; at one time obstinately costive, at another relaxed.

Generally a sallow complexion, with a discoloration under the eye-lids; giving to the patient an aspect of melancholy and dejection: there are exceptions to this; for the bilious tinge proceeds from the absorption and retention of Bile in the circulation; therefore, when the patient perspires copiously, that matter is thrown off by the skin.

The Pain ceasing entirely for several months, and again returning without any apparent cause.

The absence of such symptoms as indicate inflammation or debility.

A great tendency to vomiting, and a suspension of the Pain during its operation,

Frequent and sudden fainting fits.

Some-

Sometimes an appearance of jaundice all over the body.

An aggravation of the symptoms by using purgative medicines, which produce great sinking and prostration of strength.

Another peculiarity, though not to be regarded as a pathognomonic symptom, is a great tendency to rheumatism; whether from the obstruction occasioned by the free passage of Bile into the duodenum, and its consequent regurgitation and absorption into the circulation, or from the debility of the Stomach, which is always the effect of Gall Stones, to a certain degree.

General languor and dejection of spirits.

An incapability of digesting solid animal food, or only in small quantities.

These symptoms pretty strongly indicate that the Pain is the effect of Gall Stones. The event of the case cannot, however, be predicted by this discovery; for their number and magnitude still remain to be ascertained.

The cure consists in applying warm fomentations to the seat of the Pain, and if the pulse is

affected, to use the warm-bath. It is for Spasms of this description likewise, that a draught of water, made as hot as it can be swallowed, is found very serviceable. The Tincture of Digitalis, in small doses, often repeated, does good: a tea-spoonful of Tincture of Guaiacum affords great relief; but for the immediate mitigation of Pain, Opium is the best medicine, and must be administered with freedom.

The Pain of the Stomach proceeding from Gall Stones, is distinguishable likewise by certain peculiarities. It is of two kinds: one spasmodic, appearing obviously to proceed from a contraction of the fibres of the Stomach; this comes on by paroxysms, and if it commence at first with great violence, the Stomach is liable to take on the same morbid action, at the same hour, on the next or some succeeding day, owing to the influence of habit.

This Pain is sometimes so violent, that the patient is compelled to fly to opium for relief, and can swallow very large quantities without feeling its narcotic effect: the patient frequently expresses a conviction, that unless this remedy were at hand, the pain would prove fatal, and there is reason to believe this has really happened, and been attributed to gout.

But besides this spasmodic pain, which is occasional,

casional, there is felt a constant burning pain, and such exquisite degree of sensibility in the Stomach and region of the liver, that the slightest pressure is intolerable.

It may naturally be expected that, for the relief of this, leeches and blisters would be found serviceable, but it is a fact I have ascertained by experience, that blisters do not in general afford much relief; neither have the leeches such an effect as might be expected. Supposing it to arise from common inflammation, the best remedy, in addition to what has been already recommended, is antimony given according to the circumstances of the case: if the pain and tenderness, perceptible by pressure, have been coming on gradually for some time, antimony given in small doses, in combination with the sulphat of magnesia, is the best mode of administering it. Under this plan of treatment, it will be generally found, that the pain diminishes, and what is more extraordinary, the strength and appetite return.

When the pain has come on rather suddenly, is extremely acute, and spasmodic, and little of the fixed burning Pain, then antimony should be given in a full dose, to produce free vomiting.

This assertion is contradictory to the notions some people entertain of good practice; but practice,

practice, the best criterion of its truth, bears me out in the opinion. Such a point as this is not to be decided by hypothesis: I recommend, therefore, with perfect confidence, from my own experience, the exhibition of an emetic to relieve the pain produced by the passage of a Gall Stone; and to those who are not satisfied with this assurance, I shall beg leave to observe, that vomiting is commonly the method which nature has recourse to, the pain from Gall Stones being often terminated by a spontaneous fit of vomiting, as if to upbraid the practitioner for his ignorance and timidity.

### CASE

*Of Pain in the Region of the Stomach, with Symptoms apparently dyspeptic, cured by the Antiphlogistic Plan.*

It is a fact which cannot be too strongly inculcated, or too generally diffused, that debility, when it is not the effect of long protracted disease, or some extraordinary evacuation, or want of food, is almost always symptomatic of some disease in the system, which being removed, the debility will be removed likewise; and this, as has already been remarked, is sometimes to be accomplished by means apparently calculated

to

to increase, instead of diminish it, such as bleeding and purging; and though this assertion may not be denied, it is certain, that it is not practically applied to general use; no error being more common or pernicious, than the misapplication of bark and corroborants, and no conclusion more readily adopted where symptoms of debility occur towards the advanced period of life, than that conveyed in the expression *a breaking up of the constitution*, with which I have known several families rest satisfied, and resigned to what appeared the irresistible decay of nature, when at the same time some lurking disease was creeping on, and undermining the strength, whose progress might have been easily checked, if its existence had been speedily suspected.

### CASE.

The lady, whose case I shall now very briefly describe, applied to me some years ago complaining of pain in the Stomach, loss of appetite, lowness of spirits, and debility, with a good deal of flatulence in the bowels; symptoms that had continued three weeks. There was no costiveness, or any particular foulness of the tongue, and the pulse was low and weak, but not quicker than natural. She felt languid, and

her

her countenance was somewhat pale and dejected, with a sense of distension after eating, and weakness of the limbs: menstruation had been regular. Now I should be glad if the professional reader would pause a moment here, and ask himself, what was the disease, and what the treatment which a case thus represented would lead him to adopt.

I confess I was led to conclude, from the general complexion of it, that there was some disorder in the Stomach and bowels, which would be relieved by tonic medicines, and accordingly prescribed infusion of quassia, with a little carbonat of pot-ash and tincture of carcarilla, to be taken twice a day. Two days after this I saw her again, and found her rather worse; she had not slept well, felt more languor, and had a burning heat in the palms of her hands. To relieve these sensations, as the bowels had been confined for two days, I recommended small doses of the sulphat of magnesia, and infusion of roses, to be used in such a way as to operate three or four times, expecting it would be productive of good effects. Here again I was disappointed, for though the operation of the cathartic was answerable to my wishes, it produced considerable irritation, and the febrile symptoms gained ground, in particular she complained of being very hot and

and feverish at night as soon as she began to feel warm in bed; a sense of burning heat in the surface of the skin, with great general irritation, kept her awake for two or three hours in the early part of the night.

I now saw clearly the complaint was of a different description from what I had at first reason to apprehend, and questioned her very closely with respect to the probable cause of it. After a good deal of consideration, she recollect-  
ed having sat down in the fields about six weeks since nearly half an hour, and thought it felt rather damp when she arose up, as a slight rigor came over her: this confirmed my suspi-  
cions, and without any hesitation I recommend-  
ed the use of a warm bath, the application of a large blister to the abdomen, and a diaphoretic medicine, composed of antimony and opium at night.

The effect of this treatment was singularly beneficial, the heat and irritation at night were subdued; free, copious, and comfortable perspiration came on, the appetite and spirits re-  
turned, and in two days she seemed perfectly recovered. In this case there was only one symptom at all characteristic of the disease, viz.  
the burning heat felt soon after the patient was in bed; this at least is all that appeared like inflam-

inflammatory action, all the other symptoms gave strong indications of dyspepsy, and to this they would in all probability be referred by any one not conversant with the peculiar character of internal membraneous inflammation.

In the case related above, the Pain in the Stomach evidently originated from sitting on damp ground, though the immediate effect of that was so slight as almost to have escaped observation. The more usual causes are a change of dress, standing in a cold room, or in a current of air, but particularly the changes of dress.

The subjects among whom Spasms of the Stomach of this description are found principally to occur, are, females who have miscarried, or lain-in, there being on these occasions a very great susceptibility of cold, and of peritonæal inflammation; and whether by the Stomach sympathizing with it, or from any inflammatory state of the Stomach itself, the Spasm is produced, it is not easy to determine; but the point in practice which I endeavour to establish is, that such Spasms are not to be treated by what are called antispasmodic remedies, but by those medicines which act on the antiphlogistic plan, of which the best in my opinion decidedly are antimony and digitalis conjoined; there being, I have reason to believe, some peculiar effect produced

produced by their combination, different from what is experienced when either is administered individually.

### CASE.

Mrs. W. aged 35, has had four children, the last is three years of age, complains of great weakness and internal sinking, with a *flickering\** at the Stomach, and violent Spasms *at times*, which almost stop her respiration, and shoot from the pit of the Stomach apparently through the spine; was seized in this manner very suddenly six weeks ago, but on enquiry acknowledges she has been drooping ever since she last lay-in; has a coldness at the Stomach, and constant pain in the forehead near her eyes, the tongue whitish, but not foul; whenever she takes wine, or spirits, feels inclined to faint, and a profuse perspiration, with flushings of heat break out over the face, the tongue trembles when put out, and a tremor is observable in the muscles of the arm; believes she caught cold by going out on a cold day three weeks after lying-in, and wetting her feet, as she was obli-

\* This word is frequently made use of by the common people, and as it is a kind of onomatopœia which is easily understood, I have used it, that the case may be conveyed as far as possible in the language of the patient.

ged to keep her bed for some days afterwards, with fever and pain in her side; ordered the following:

Præmiss fotu Papav. Abdom. applica.  
Emp. Canthar.

R Ol. Ricin. Tinct. Sennæ a ʒji.  
Pulv. Gum. Arab. ʒʒ Aq. Meuth. ʒx.  
M. ft. Haust. bis die sumend.

The fomentation appeared to give much relief, and the blister acted; felt lighter and pleasanter about the head, but was rather more feverish than usual during the night, with much sickness at Stomach. One stool the next morning. Ordered

R Antimon. Tart. gr. j. Tinct. Digital. g<sup>tt</sup> x.  
Syr. Croci ʒij. Aq. Distill ʒvj.  
M. capt. Coch. ij. ampl. ter die.

A little sickness was produced by the first two doses, but not afterwards. Continued the use of this medicine, and felt a moisture come on the surface of the skin at night, which she had not observed since she had been ill; the appetite began now to improve, and in the space of ten days, or thereabouts, considered herself cured.

I omitted to mention what I have frequently observed in this and similar cases, that great thirst

thirst came on occasionally, a circumstance which it is not easy to explain. I am inclined to think it is owing to a deficiency in the supply of nervous energy transmitted to the Stomach; the secretion of fluid on the surface of this organ is thus for a moment interrupted, and thirst is the consequence.

From the facts I have now adduced, and many others with which my experience has supplied me, I am warranted to believe, that Spasm in the Stomach is rarely attributable to debility, but arises generally from an irritation in some other part, the nature of which it is our first business to ascertain.

### CASE

*Of sudden Death, with Symptoms very similar to Apoplexy, preceded by Pain in the Stomach.*

I was called some time ago to a patient in Buckingham-Street by Mr. Jones, Surgeon in the Strand; when I arrived I found a man about thirty years of age, of an apparently strong unimpaired constitution, lying in bed totally insensible; his eyes were closed, his countenance pale and livid, not the least pulsation could be

felt; he breathed with great difficulty, had high and laborious respiration, with some marked intervals between each inspiration; his feet and whole body were warm, and his face covered with drops of perspiration.

From this assemblage of symptoms I did not hesitate to prognosticate that he would not survive an hour, which prediction was too fatally verified, as he died before I left the room; and at the instant of his death, a small quantity of blood poured out from the nostrils of a dark colour. As I deemed it incumbent on me to recommend what appeared most applicable to his situation, however small the probability of success, I proposed,

1st, Bleeding in the jugular vein.

2nd, A stimulating clyster, made hot.

3rd, Hot applications to the soles of the feet.

Nothing could be thrown into the Stomach, the hot applications were made to the feet, the jugular vein could not be opened, and before the clyster could be prepared the patient died. The vascular system was in a state of collapse, hence no jugular vein could be discovered.

On making minute enquiry into the history of this man's case, I was informed that some years before,

before, he had been attacked in a similar way, and was then relieved by blisters and fomentations to the Stomach, but ever afterwards entertained a presentiment, that he should not survive a second similar attack. On this last occasion he first complained two days prior to his decease, of pain in the Stomach and back, and said he felt himself altogether indisposed; besides this, his fellow-servant knew of no other symptom. On the morning of his decease, she found him in bed insensible, snoring aloud, and violent perspiration over his face: this continued till near the time I saw him, when this apoplectic stertor was not present.

## DISSECTION.

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From the peculiarities of this case it was universally believed, his death was owing to apoplexy, and we sought an opportunity of opening the body, more with an idea of giving confirmation to the opinion, than from any doubt entertained of its being correct.

I opened the head in the presence of Mr. Jones and his assistant with great care, and without injuring the brain, or lacerating its membranes. I carefully examined and removed the whole substance of the cerebrum, and proceeded with equal caution with respect to the cerebellum, but did not discover the slightest deviation from what might be called the natural and healthy state of the brain, much less any thing that could have produced this fatal termination.

I then opened the abdomen, and there detected nothing that could satisfactorily account for death. The liver was very dark-coloured, the Stomach and intestines were, on their external surface, free from any appearance of disease; they were somewhat distended by flatus, but the Stomach seemed emptied of food. The diaphragm was, as I conceived, more concave than is generally found, and the liver so high up, that

that no part of it came below the cartilages of the ribs.

I next opened the thorax, found every thing in a natural state, except an adhesion of the lower portion of the right lobe of the lungs to the diaphragm, and very partially to the intercostal muscles adjoining. I likewise dissected the heart carefully, but discovered nothing like disease, or malconformation.

What conclusion, therefore, are we warranted to draw from these appearances? As to apoplexy, nothing was found to justify the idea; and though no disorganized structure was visible in the Stomach, yet as we know that organ is subject to spasm where no diseased structure exists, as the same symptoms in a slighter degree had affected this patient several years before clearly referable to the Stomach, and relieved by the application of remedies to that organ, there is the strongest reason to believe, that this part was the seat of the disease.

It is of the highest importance to bear this in mind, for if, as I believe is too generally the case, we are led away with the idea of apoplexy, our attention will of course be directed to the head, and the patient is not in a situation to give us any information that may correct our errors.

I have reason to believe, that a great proportion of cases which have been deemed apoplectic, were totally unconnected with any primary affection of the head, and originated from a fault in the function of the Stomach ; at least it is certain, that in five cases out of six, where the head is affected with pain, with stupor and giddiness, the Stomach is the source from which these symptoms proceed. The following Case came under my observation.

#### CASE.

A young lady about sixteen has for seven years, or thereabouts, been afflicted with violent vertigo, and intense pain in the head, with only occasional intervals of relief, and then even is not perfectly free from pain. She applied to a Surgeon of the first eminence, who tried every thing that had a tendency to relieve the head, but without any permanent or decided benefit. She was cupped repeatedly, had several blisters and leeches frequently applied, but all directed to the head, or its vicinity. The countenance of this patient is florid, and great heaviness is discernible in the eyes, the upper eye-lids falling down, so as to give the appearance of her being half asleep.

Wherever

Wherever this is met with, especially if accompanied with a sense of weight across the forehead, and giddiness, we may safely venture to conclude the Stomach is affected.

On enquiring into the history of the case, I discovered that her symptoms originated just about the time when she was afflicted with the small-pox, which she is of opinion was driven in by too much exposure to cold; for she says, "she never has been right well since."

There are two remarks made by Morgagni, which ought always to be attended to in medical examinations; the one, that we should search for the first cause of a disorder; the other, that we should always enquire into the nature of the complaints to which the parents of a patient have been liable. Of these two valuable practical observations, the first ought especially to be remembered, as being most likely to furnish a key to the case, by enabling us to trace the changes of a disease to some primary affection from which they proceed, as the natural concatenation of cause and effect; and in this particular instance it conveys important information, for in the small-pox it is well known the Stomach is principally attacked; pain in the epigastric region, previous to the appearance of the eruption, being the most characteristic mark of that disease.

As soon as the eruption is thrown out, the pain in the Stomach is relieved; this is the case likewise, though not strikingly, in all other general eruptions in the skin, which are preceded by sickness and vomiting: these symptoms vanishing on the appearance of the eruption, and again returning when by any means that eruption is repelled.

This reasoning served to convince me that the Stomach was the part affected in the case now under consideration; and disregarding the head entirely, I began by recommending a blister to the pit of the Stomach, and the use of an emetic, consisting of

Pulv. Ipecac. 3j. Tart. Antimon. gr. j. Aq. Meuth. 3j. M.

She felt some reluctance to take the emetic, which had never before been suggested, but was prevailed upon to abandon her apprehensions, as they seemed to arise from prejudice rather than experience. The blister proved efficacious, and the emetic operated moderately; she felt weak the next day, but in a day or two afterwards her general health improved, and her head was much relieved. Ordered the following:

R Nitri purificat. Pulv. Cum. Arab. aa 3ij.

Tinct. Opii Camphorat. 3ij.

Tinct. Digital. g<sup>m</sup> xxx. Aq. Distill. 3vfl.

M. ft. capt. Coch. iij. majora bis die.

Felt

Felt this medicine *comfortable* to the Stomach, and was decidedly better after continuing it a week; but the bowels are rather costive: omitted the use of the mixture therefore, and ordered in its stead the following:

R Ol. Ricini ʒS. Vitell. Ovi. q. s.

Tinct. Aromat. ʒj. Aq. Distill. ʒj. M. ft.

Haust, mane sumend. et p. r. n. repetend.

This medicine, mild and gentle as it appears, disagreed very much, produced great heat in the Stomach, and griping of the bowels, with much general irritation. I should be disposed to suspect the purity of the oil, had I not since met with several instances where similar effects have arisen, and ascertained beyond all doubt, that many Stomachs have an invincible antipathy to oily medicines, however pure and free from rancidity.

The bowels having been evacuated, I returned to the use of the former medicine, adding to each dose a quarter of a grain of the tartrite of antimony, and applied a large burgundy pitch plaster to the Stomach, occasionally administering small doses of the sulphate of magnesia in infusion of roses, to keep the bowels open: by these means, in the space of five weeks, this patient was completely cured of a most distressing

ing head-ach that had continued seven years, and which I believe proceeded from a peculiar kind of erythematous inflammation of the Stomach, in consequence of the repulsion of matter from the skin.

*Of Spasm in the Stomach as connected with  
Phthisis Pulmonales.*

There is a reciprocal influence between the Stomach and the Lungs, as I shall endeavour to point out more clearly in the consideration of spasmotic asthma, in consequence of which the disease of one part frequently discovers itself by some pain, or some intermission occasioned by the functions of the other.

An oppression in the breathing, is, for this reason often to be ascribed to the Stomach ; and a pain in this organ, on the contrary, is in conjunction with other symptoms to be regarded as an evidence that the lungs are affected. This, by the way, may be alledged as an additional reason for our searching for the cause in every instance of Spasm of the chest.

When it is seated in the lungs, the pain shoots very generally to the left side.

The breathing is always very short and difficult, especially when going up an ascent.

A numbness is felt in the left arm.

Perspiration, often profuse, takes place towards the morning, and is always clammy and adhesive. This peculiarity in the matter of perspiration is greatly to be relied upon as an indication of pulmonary complaints; from the same cause the face exhibits a greasy appearance, and when with these there is a remarkably enlarged pupil of the eye, the features of the disease are pretty strongly delineated.

These diagnostics should not be disregarded, for if we have recourse to bleeding to relieve the Spasm, we run the risque, by the debility it produces, of throwing the patient into an incurable consumption; and if we administer antimony and digitalis, on which I have laid so much stress in the cure of Spasms originating in inflammation, we are likewise pursuing a plan, that for the same reason must prove prejudicial.

This spasmodic affection takes place previous to the appearance of hectic fever, and is no uncommon prelude to that train of formidable symptoms which have long been the opprobrium of medical science; and it is in this stage alone, probably, that we can hope to succeed in arresting the progress of this fatal calamity.

The means however are limited, and it is of as much importance almost to know what to avoid, as what to administer. Bark never fails

to do harm, so do active purgatives, as well as stimulating aromatics.

As this kind of Spasm is frequently accompanied with a cough, it is not unusual to recommend small doses of oxymel of squills, but unless counteracted in its nauseating effect by its combination with opium, or the warm gums, it produces fever, restlessness, loss of appetite, and weakness, and renders the patient's situation worse than before.

The remedies to be resorted to are, for the immediate relief of the Spasm, hot poppy fomentations to the Stomach, opium and vitriolic æther internally, or the following, which is greatly to be relied upon.

R Tinct. Opii g<sup>m</sup> xv.

Tinct. Ferri Muriati g<sup>m</sup> xx. Aq. Distill. ʒj.

M. ft. Haust. urgente dolore adhibendus.

Though general bleeding in this case does harm, the application of two or three leeches, or the loss of a few ounces of blood by cupping upon the part is very serviceable: the pain indeed probably proceeds from some obstruction to the circulation of blood through the lungs from tubercular structure, as it commonly attacks the patient in the Spring, as soon as the weather begins to get warm.

I have remarked this in several instances, and have in my recollection at present many persons who just at that season of the year have had a recurrence of this pain in the Stomach and left side, with all its concurrent attendants; and besides these already enumerated, there are perceived sudden alternations of heat and cold, a sense of coldness in the side, and a *trembling of the inside.*

I cannot comprehend exactly the meaning of this expression, so frequently employed by these patients in giving a description of their feelings. The sensation is certainly not imaginary, for when desired to put out the tongue, that part is found to want a due portion of muscular energy, and trembles exceedingly.

I have known some people seized at the same moment with a sense of trembling in the left side, and the muscles of the left arm, with a numbness extending to the elbow; these symptoms taken collectively, leave us little room to doubt of the state of the pulmonary system; and as I am not now writing on consumption, it may seem irrelevant to the purpose to enter more minutely into the subject.

I deem it perfectly consistent with my plan, however, to shew what share the Stomach has in the production of this disease; in my opinion,

it has a most important one, and though it is far from my intention to assert that all consumptions take their origin from a fault in the Stomach, though I admit that the proximate cause is generally a peculiar conformation of the chest, or rather, to adopt the phraseology of an ingenious writer, a "peculiar *teneritude* of the vessels of the lungs;" still I feel confident in maintaining that a disordered, or imperfect action of the Stomach, is often the foundation of consumption, by withdrawing that energy from the lungs which would have counteracted the influence of these predisposing causes.

To render this opinion intelligible, it will be necessary to consider the connection subsisting between chylification and respiration.

The formation of chyle is the business of digestion, and when this is completely elaborated, it is absorbed by the lacteal vessels, and conveyed to the thoracic duct; hence through the subclavian vein it enters the heart, and is driven by the contraction of that organ through the pulmonary artery, for the purpose of being submitted to the action of oxygen, and those changes which are effected by respiration.

Now, whether the change produced proceed merely from its exposure to oxygen as a chymical agent, or is attributable in part to the vital action

action of the lungs themselves, I will not take upon me to determine, as it is not at all material with respect to the present proposition; for supposing it to depend simply on the exposure of the chyle in the extreme branches of the pulmonary artery, if these minute ramifications have not power sufficient to convey it to their extremities, so as to come into contact with the air we breathe, it cannot partake of the influence of this principle, the consequence will be, that particles of chyle will there stagnate and produce tubercular obstruction, which is the chief source of this disease.

This opinion will be found to receive the strongest confirmation from the constitutional character of persons labouring under this complaint, of which the following are the peculiarities.

A fair thin skin, with the blood-vessels on the surface of the body subject to great enlargement and distension from slight exercise, or a small increase of temperature.

A rupture of the blood-vessels of the lungs from moderate exertion, producing haemoptoe.

Bleeding at the nose\* without any violent, and sometimes without any discoverable exciting

\* The bleeding from the nose is, I confess, sometimes rather to be attributed to the condition of the blood itself, but this is from not being properly oxygenated.

cause, all which are referable to a peculiar tenuity in the texture of the blood-vessels, and a want of vigorous contraction.

Under this state of the system, a person may by great temperance and circumspection be led on to longevity, but should any thing happen to disorder the Stomach, and impair the appetite, dyspepsy soon produces debility, the lungs are impaired in their function, tubercles form, which by the concurrence of some occasional cause, readily take on inflammatory action, and terminate in ulceration.

It is thus we can explain the progress and event of a multitude of cases presented to our view, which towards the conclusion are attended with hectic symptoms, and every appearance of pulmonary affection, that yet in the first instance presented nothing calculated to excite a suspicion of such an event.

The great object to be attended to in Spasms of this description is, the removal of that state of the system on which they depend, as there is seldom much difficulty in relieving the Spasm itself, and no immediate danger to be apprehended when the Stomach thus acts a secondary part, and is not disordered in consequence of primary affection. Ten drops of tincture of opium three times a day, will remove the Spasm, and give an opportunity for the cure.

opportunity for the use of such means as are most likely to obviate its return.

After the use of leeches, or cupping, a blister should be applied, not to the Stomach, but the left side; or if the pain is not severe and recent in its appearance, the emplast. picis aridæ will answer the purpose. Of internal remedies, there is no great variety; those on which I place the greatest dependence are, the Mist. Ferri Composit. (Pharm. Lond. nov.) and Emetics.

It may seem in some respect contradictory to prescribe a medicine composed of myrrh and steel in a case where there is reason to suspect the existence of inflammatory action; but we are not to deny the efficacy of a remedy because we cannot explain its modus operandi.

Every thing that I have advanced in this treatise is drawn from experience, and on the same authority I state the efficacy of this medicine: it imparts a grateful sense of warmth to the Stomach, without exciting fever or irritation: it likewise improves the appetite, and increases the strength, and, in short, is the best medicine in this state of disease.

The emetic I usually prescribe was long since recommended by a celebrated practitioner, Dr. Marryat, whom some are disposed to abuse, others to despise; but whose practical observa-

tions are, in my estimation, of great value and importance. I allow that his writings contain many exceptionable remarks, and that the doses he recommends of certain potent drugs cannot be administered without danger; but it is justice to affirm, that he was an accurate and diligent observer of disease, and that many of his assertions are the result of sound sense, and profound medical sagacity. The emetic I allude to is thus compounded.

R Cupri Sulphat.

Antimonii Tartrit. aa gr. ij.

Aq. Distill. 3j. M. Haust.

This should be suffered to produce vomiting, without drinking any liquid to aid its operation: hence Marryat gave it the name of the dry vomit. Like all other emetics, it is variable in its effects, but it is not, in general, violent in its operation. I confess I have sometimes heard patients complain that it strained them very much, so would any other emetic probably; for I have frequently observed that its operation has been gentle, and in one or two instances it has produced no vomiting at all.

When it does occasion the straining now mentioned, I am cautious in ordering a repetition of the dose; but I have always observed when pa-

tients

tients complain very much of the action of an emetic, that the lungs are diseased, and sooner or later they die consumptive.

I need enter no further into the treatment of these cases, deeming it sufficient to have pointed out the circumstances by which we are to distinguish *Spasm of the Stomach as connected with the Lungs*; and this naturally leads me to enquire into the

### *Influence of the Stomach in Asthmatic Complaints.*

In the preceding Chapter I have started a position, which, if I succeed in establishing it, will admit of more extensive application—I mean that the Stomach distributes nervous energy to the Lungs to enable it to perform its functions: if this be properly illustrated, the phænomena of spasmodic asthma will admit of an obvious explanation, and the following Case tends in no small degree to the same doctrine.

### CASE.

A young lady of seventeen, who had lately grown with uncommon rapidity, consulted me about a lameness which afflicted the left leg and thigh; she limped very much, felt considerable pain from very inconsiderable exertion, and was

greatly alarmed by the apprehension of her having a disease of the hip-joint.

Her countenance, as well as her general appearance, exhibited such marks of constitutional debility, that her friends suspected she had a tendency to consumption. There was certainly great reason apparently for her fears ; and I should have been disposed so far to concur with her ideas as to have directed her to make use of means calculated to avert the danger she anticipated, had I not met with similar cases in which no such consequences ensued.

I questioned her very closely with respect to the probable cause of her indisposition, but did not discover that it originated from local injury, or accident of any kind. She could attribute it to nothing but sitting too long in one position. Now whether this alone produced it, or whether, in addition to this, she was exposed to the partial application of cold, is not easy to determine.

In either case, I am persuaded a cause so slight would not have been productive of such inconvenience, unless favoured in its operation by a great deficiency in bodily energies ; and it is in this manner persons are attacked with rheumatism, who are reduced by poverty and fatigue by causes which would have produced no impression

if applied to the same individuals in the plenitude of health and vigour.

Instead of having recourse to local remedies, therefore, I prescribed those internally which were best adapted to improve the condition of the Stomach, and had the satisfaction to witness the rapid recovery of her health, and removal of her lameness, by the use of bark, bitters, chalybeates, &c. assisted by change of air.

I conclude that in this case the Stomach had not power to supply due energy to the limb, and that the inability to motion was not at all dependent on inflammation, or any other local injury in that part.

I know another lady likewise, who is often attacked with pain in the hip-joint, which nothing relieves but an emetic, and that does speedily; but to come to the subject of *Spasmodic Asthma*.

In this complaint, the patient is suddenly seized about two o'clock in the morning with a violent oppression at the chest, and sense of suffocation, which compels him immediately to rise up and throw open the window for the admission of air, the room, however large, appearing too confined; his voice becomes feeble, and articulation difficult; and after laborious efforts to support respiration, a profuse sweat breaks

out about the face and neck, that seems to pave the way for the mitigation of the paroxysm, which goes off with free and copious expectoration.

Many ingenious writers have endeavoured to account for these distressing symptoms, but the diversity, as well as contrariety of their conclusions, prove most unequivocally the fruitlessness of their researches; whilst some err in attributing the disease to causes which only occasionally occur, others have been betrayed into false conclusions by neglecting to distinguish between causes and effects.

Thus Dr. Cullen, whose authority is very likely to gain proselytes to his opinion, attributes asthma to a turgescence of blood in the lungs, without suffering himself to enquire whether the circumstances which produced this turgescence might not with much greater reason be considered as giving birth to the disease.

Sir John Floyer assures us, "that the periodic asthma depends on the constitution of the bronchia and bladders of the blood by windy spirits."

Hoffman attributes it to the presence of subtle virulent matter falling on the nerves, from the repulsion of sweat, or exanthemata.

Darwin accounts for it by his concatenation of muscular motions. This ingenious philosopher  
    felt

felt dissatisfied with the explanation generally given of the cause of asthma: he asks modestly, “Do the periodic returns of nocturnal asthma arise from a temporary dropsy of the lungs collected during their more torpid state in sound sleep, and there absorbed by the vehement efforts of the disordered organs of respiration, and carried off by the copious sweats about the head and neck?”

Many other theories might be mentioned, but as asthma is not the subject of our present enquiry, it would be unseasonable to investigate the different opinions which have occasionally sprung from the imaginations of those who have made this the subject of enquiry; the object of my present solicitude being to ascertain how far it is connected with, or dependent on, the functions of the Stomach; and I think I can confidently assert, from no very limited portion of observation and reflection, that in a great proportion of cases, we are to attribute asthma to a morbid state of the structure or functions of this organ.

It would require a very numerous collection of cases to enable a person to state with any tolerable approximation to truth, what that proportion is; but in asserting it as my opinion, that asthma proceeds in twelve cases out of fifteen

from this source, I can appeal, without dread of contradiction, to the authority of well-authenticated facts ; and it is really wonderful, that men of observation and experience, who have witnessed the uniform derangement of this viscus in asthmatic complaints, have not been led to attach more importance to the phenomena.

If I attempted to establish the truth of my opinion on this point, by abstract reasoning on the nature of sympathetic action, and the analogy which subsists between the Stomach and the different viscera of the body, I should despair of advancing any arguments which could not be overturned by other modes of explanation, more ingenious and equally compatible with the functions of the animal œconomy.

But the ground on which I have founded my conviction, leave no room for doubtful disquisitions: it is briefly this.

In *all* cases of asthma, the Stomach is disordered in its functions more or less, generally this disordered state of the Stomach is a prelude to its approach; and whenever medical aid is successfully administered, the renovation of the powers of the Stomach is the consequence of their operation.

“ The attack of a paroxysm, of periodic or convulsive asthma (says Dr. Bree in his work) is

is preceded very generally by dyspepsia, and the circumstances which occur to a relaxed habit. This condition of the body may have prevailed for months, or years, before it assumes the additional form of asthma, but when that disease is commenced, the symptoms of dyspepsia never fail to become aggravated, and to shew themselves with violence before the fit. These symptoms are flatulence, and distension of the Stomach and bowels, a heavy pain over the forehead and eyes, eructation of wind with water, which is sometimes insipid, at others sour."\*

I select this quotation from Dr. Bree's work, not merely from my admiration of its merit, but because the author mentions it without any intention of attributing to the Stomach that share in the production of the disease which I am persuaded it possesses: hence his representation is not likely to be biassed by any previous partiality to his own opinions; and as he has watched with faithful accuracy the symptoms of this disease, and had moreover the unenviable opportunity of marking its peculiarities by a painful experience in his own person, I shall select from his work a few remarks relative to the point I wish to confirm. In page 217 he says, "Dyspepsia is a

\* Vide Dr. Bree's ingenious publication on Disordered Respiration.

condition of the habit which will be found *always to have preceded* the periodic asthma, and it comprises in its train the flatulencies of the stomach and bowels, &c."

And again, at p. 248, speaking of the appearance of the urine, he says, "it is frequently pale and copious without the fit coming on, but attending on occasional indigestions, *to which the asthmatic is for ever liable.*"

At p. 260, "Wherever dyspepsia prevails, there shall we find a fruitful opportunity of exciting the paroxysm of asthma; but," he adds, "this morbid debility of the Stomach *must probably* concur with accidental causes before the disease appears."

On this point I must take the liberty of differing from Dr. Bree, much as I am disposed to think highly of his abilities. Where the coincidence between the cause and effect is so complete, there seems to be no necessity for the introduction of any auxiliary agent. If any further corroboration with respect to the influence of the Stomach be necessary, Dr. Bree's own case will supply the evidence; and therefore I think it proper to introduce here an abridged history of his complaint

He says, p. 411, "R. B. enjoyed general health in various situations until 1783, when *dyspepsia*\* first attacked him at twenty-five years of age. The symptoms increased gradually for four years: he was hypochondriac, sleepy after meals, and had constant pains in the intercostal muscles. 1788. Reading was painful, his eyes constantly inflamed, a stupor came on every night, and apoplexy was apprehended. He had lived upon a very weak and fluid diet, and taken saline medicines very injudiciously. In the summer, after awaking in the morning, he perceived some wheezing in his expirations, bat no dyspnoea. In the autumn, after a catarrh and fatigue in riding, he was seized in the usual manner with a paroxysm of convulsive asthma of the first species."

Here let me address myself to the candid and impartial reader, and ask him if any thing can more strikingly demonstrate the influence of the Stomach in the production of disease than the symptoms now enumerated. The stupor and hypochondriacism, the sleepiness after meals,

\* It may be well to inform such readers as may not be familiar with technical phraseology, that Dyspepsia comprehends all those symptoms which are usually attributed to Indigestion, such as sickness, flatulence, sense of fullness and oppression, and belchings, heart-burn, &c.

and appearance of apoplexy, are obviously the effect of a diseased state of this organ, and come with rigid propriety under the denomination of dyspeptic symptoms.

But this correspondence between the cause and effect does not terminate here; for in page 413, he says he was somewhat relieved. "*Dyspepsia was less, and his general health improved.*" Again, "*in summer the dyspepsia was greatly abated, and the intermissions became longer.*"

Now what plan of treatment might reasonably be expected to prove most efficacious in the treatment of a disease so evidently connected with an imperfection in the organs of digestion? Certainly that which was best calculated to restore these digestive organs to their original tone, and such it will be found, answered the hopes of this gentleman.

Page 413, "He now pursued more vigorously the plan which he had adopted; he took iron in large doses, and in all preparations, but preferred the rust, *which corrected dyspepsia* most powerfully. He went into the cold bath every other morning, and took absorbent earths frequently with bitter infusions, and rhubarb." By a due perseverance in this plan, aided by temperance, and *early rising*, Dr. B. escaped from the *tyranny*, as he calls it, of this *morbus maxime terribilis*.

In treating with so much freedom the opinion of Dr. Bree, I hope I have not trespassed on the respect that I think due to his character and talents; which are already too justly appreciated to require the encomium I should otherwise feel inclined to bestow.

In exploring the origin of disease, our enquiries are naturally assisted by observing what aggravates or mitigates its system, or, in technical language, by attending to the *juvantia* and *lædantia*: now, certainly, a reference to this mode of examination will not present any contradiction to the opinion here expressed of the cause of spasmodic asthma. The cold bath, and steel medicines, direct their operation particularly to the *primæ viæ*; and if their influence could be supposed to extend to the lungs, we have no reason to anticipate any salutary consequences from it.

In cases where the lungs are obviously diseased, every one acknowledges the necessity of avoiding the cold bath; and where it has inconsiderately been recommended, the patient has had reason to regret his obedience to the prescription: indeed, it is very easy to demonstrate the effect that this practice is calculated to produce. The first impression of cold water tends to repel the blood from the surface of the skin to the interior organs, and by accumulating in

in the lungs, it must aggravate any inflammation which may then exist, or be very likely to occasion that serious effusion, which this author so seriously apprehends to be the fountain and foundation of danger.

Now this same operation directed to the Stomach will be found productive of a very different result. There is an invariable affinity between the energy of this organ, and that fluid (the gastric juice) which it is intended to secrete; and as it is a rule in physiology, that *cæteris paribus* the secretion of a part is in proportion to the quantity of blood conveyed to the secreting organ, the influence of the cold bath on the surface of the skin, by driving the blood from the circumference to the centre, tends to the augmentation of that fluid, and the renovation of its digestive faculties.

I have no hesitation, therefore, in recommending those who have the misfortune to labour under this formidable complaint, to direct their attention to the state of the Stomach, and to draw their hopes of amendment from the probability which exists of counteracting the mischief it may have sustained.

Perhaps it may be said, where is the necessity of scrutinizing into the cause of the disease, if the cure is at hand? This remark, as far as it is applicable

applicable to cases where the remedies employed are certainly adequate to the cure, may with some propriety be advanced; but surely we are always liable to be misled, if we are acting on principles repugnant to the nature of the disease, and this has been the source of error in the present instance: hence the different vapours and gasses which have been exhibited with undiminished expectation, though with uniform inefficacy, from the time of Hippocrates to the present day, all founded on the imaginary indication of excess of serum. Frankincense, and myrrh, and all the aromatic vegetables of the East, have been successively resorted to, to counteract the supposed agency of this exciting cause; with equal alacrity practitioners have employed expectorants, demulcents, emollients, &c. but without success, and frequently with an evident aggravation of symptoms. It is only so far as they are adapted to strengthen the Stomach, to dispel flatulence, to correct acidity, and, in short, to obviate all the symptoms of dyspepsia, that the medicines employed have been found to answer the purpose of the prescriber.

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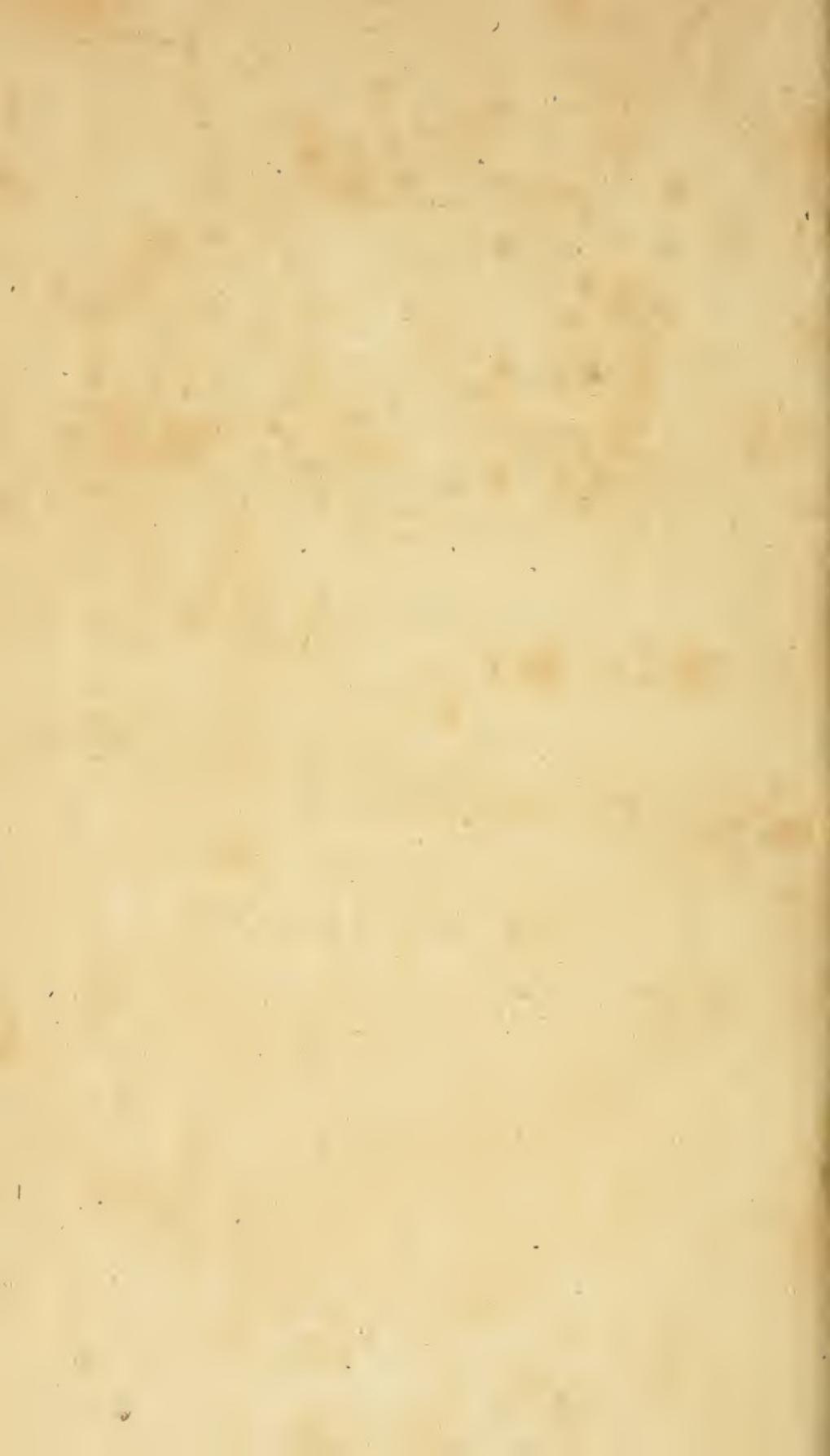
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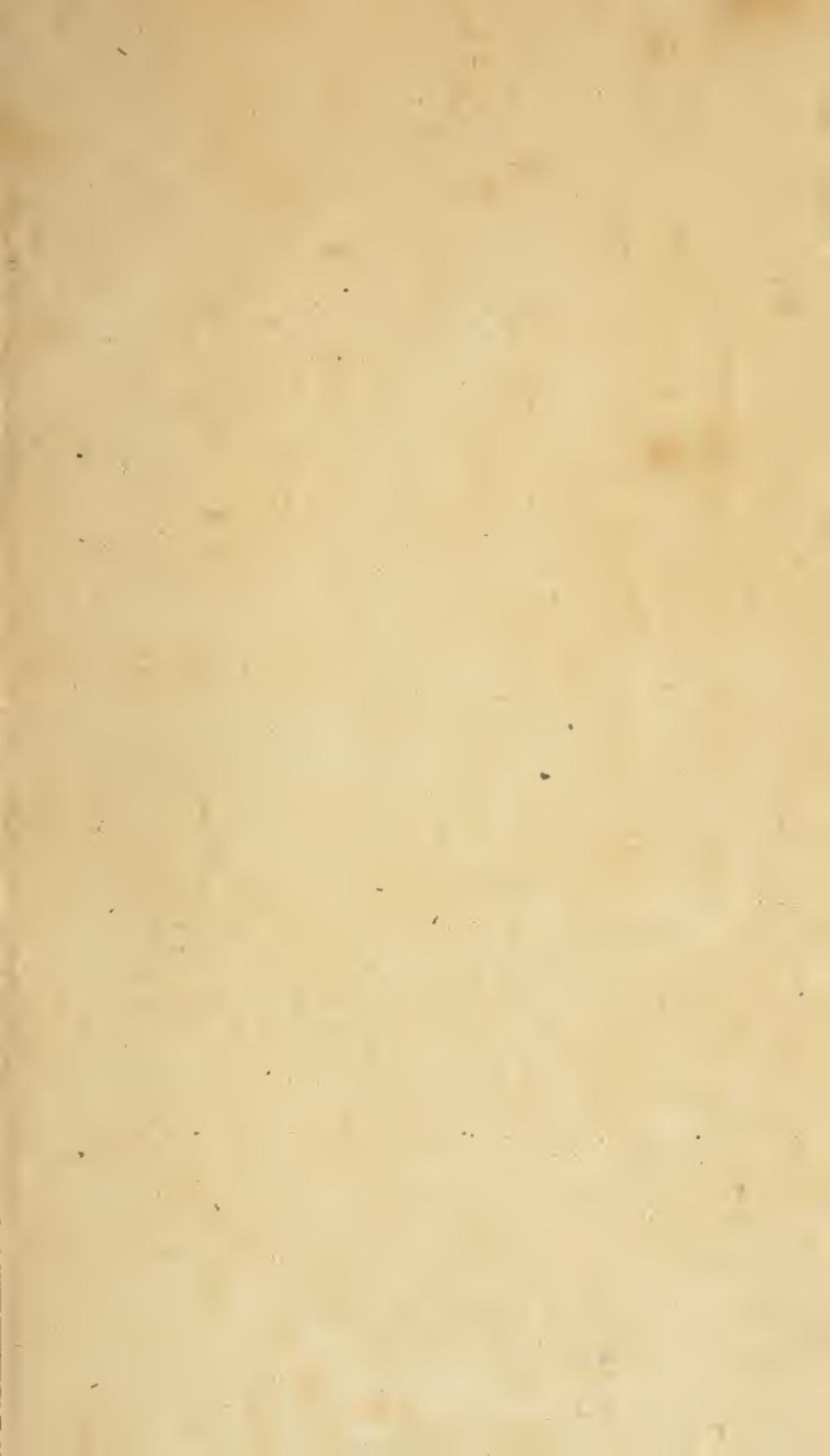
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LONDON:

PRINTED AND SOLD BY M. ALLEN;  
NO. 15, PATERNOSTER-ROW









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